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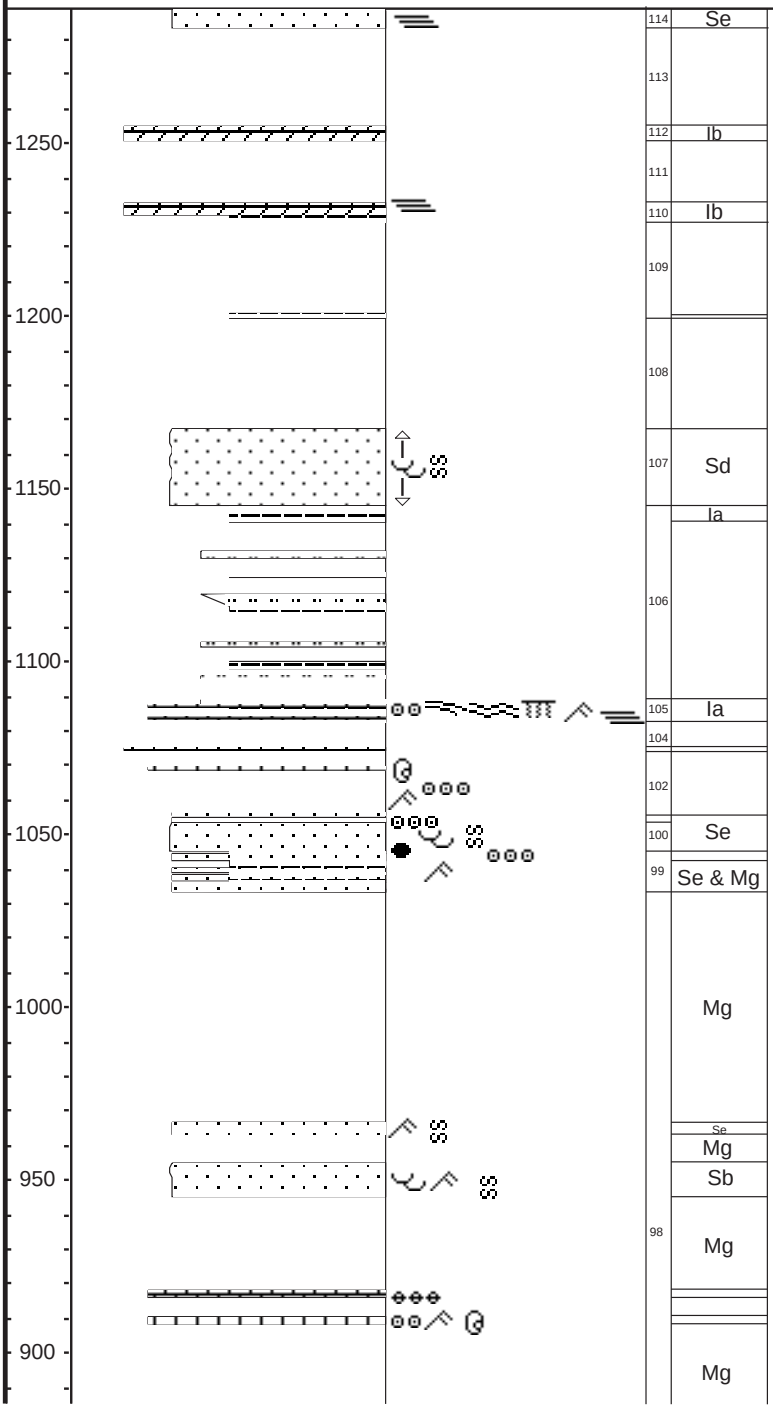
Remy 7

The section is located at the junction of Nine Mile and Gate Canyons, beginning in the NE1/4SE1/4 section 32 and ending in the NE1/4SW1/4 section 29, T. 11 S., R. 15 E., of the Salt Lake Base line and Meridian, Duchesne County, Utah.



Unit 114: Sandstone, fines upward (280-170 microns). Planar laminations with parting lineations.

Unit 113: Covered.

Unit 112: Dolostone. Laminated and kerogenous (oil shale), upper half weathers to paper shale.

Unit 111: Covered.

Unit 110: Mudstone and dolostone. Basal 23.6 in. is yellowish-brown mudstone; 23.6-51.2 in. is laminated, kerogenous dolostone (oil shale); 51.2 in. to top is laminated dolostone. All three subunits contain streaks of yellow silty rock (tuff?).

Unit 109: Mainly covered: 9.8 in. thick bed of light brown calcareous mudstone grading into kerogenous dolostone (oil shale) at base.

Unit 108: Covered interval.

Unit 107: Sandstone, 175-300 microns. Base sharp and scours 7.9 in. into underlying mudstone; well exposed large-scale trough cross-beds, some are oversteepened.

Unit 106: Mainly covered. Light-gray soil, few thin outcrops of calcareous, coarse-grained siltstone and medium-brown calcareous mudstone; brown laminated mudstone crops out beneath unit 107.

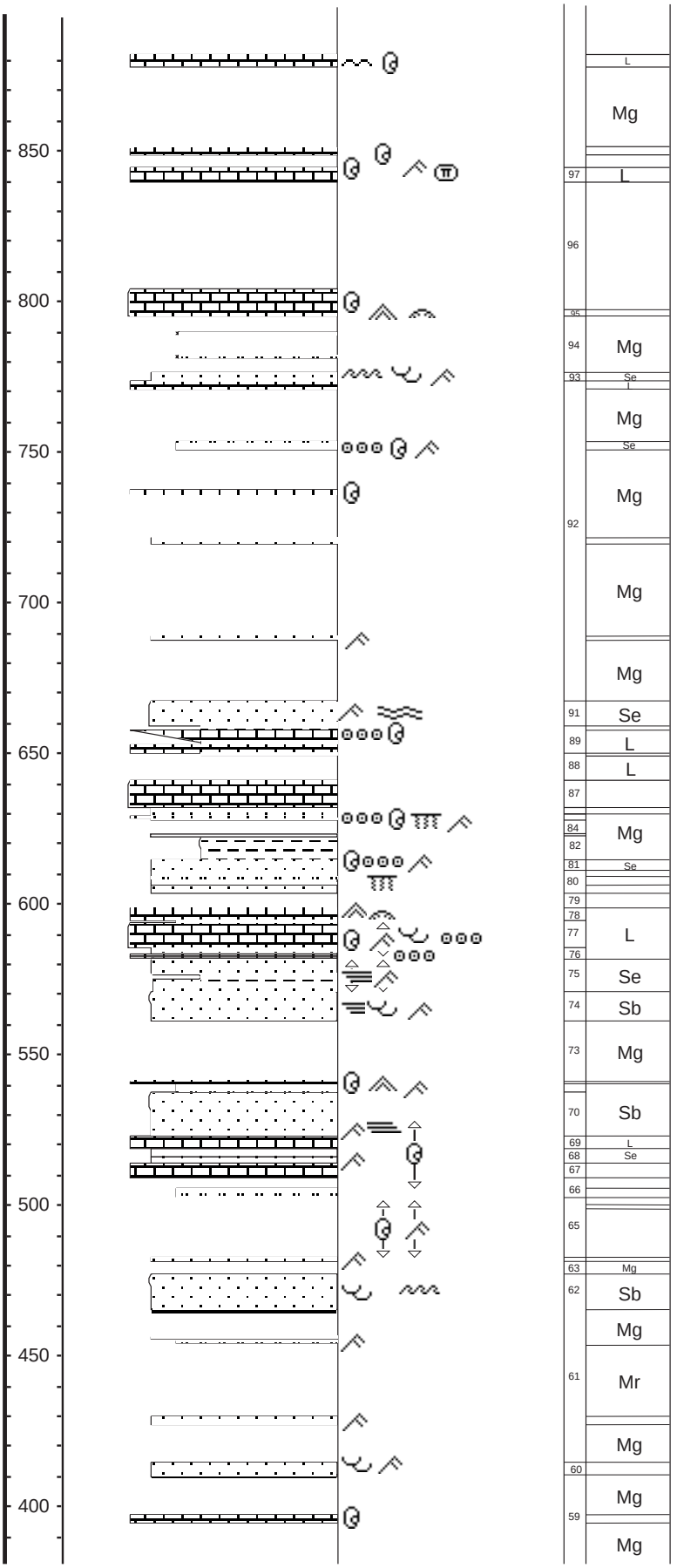
Unit 105: Interbedded siltstone, mudstone, limestone and sandstone. Basal 6.3 in. is coarse-grained siltstone; 6.3-10.6 in. is covered; 10.6-40.6 in. is light gray-olive is massive calcareous mudstone grading up to silty mudstone;40.6-51.2 in. is calcareous coarse-grained siltstone; 51.2 in. to top is sandy limestone.

Unit 104: Covered slope.

Unit 103: Dolostone. Laminated and kerogenous (oil shale), light bluish-gray weathered color, very dark-gray fresh color, slight oily smell.

Unit 102: Mainly covered. Three thin outcrops: Base consists of thin lenticular sandstone, rippled, 125 microns; middle 90 micron sandstone containing minor ooids and ostracodes; top is ostracodal grainstone with coated carbonate grains.

Unit 101: Sandstone, seperated into three beds by covered slope. Basal bed 5.9 in. thick, ooids; middle bed 7.9 in. thick; top bed 3.1in. thick. All beds have poorly exposed ripples.



Unit 100: Sandstone, fines upward. Base is sharp and dips 5 degrees to N.30E. Truncates unit 99, usually lacks lag deposits, but locally can contain large (11.8 by 5.9 by 5.9 in.) limestone blocks. Mudstone interbeds near top.

Unit 99: Interbedded green mudstone, sandstone, siltstone, and limestone. Bed thickness less than 31.5 in. siltstone coarse and rippled, in places top 13.8 in. is a bed of ooid grainstone.

Unit 98: Poorly exposed interval. 3.6 feet above base is ostracodal grainstone. At 877.7 feet there is a 4.9 foot bed of silty micrite which contains green mudstone partings and thin interbeds. At 908.9 and 915.4 feet there are two thin beds of rippled ostracodal limestone and a bed of limestone containing coated carbonate grains, respectively. Two small sandstone beds between 944.9 feet and 967.9 feet.

Unit 97: Limestone. Base is very light-gray micrite; middle is rippled ostracodal grainstone containing minor intraclasts and fish scales; top is ostracodal grainstone.

Unit 96: Mainly covered. Slope covered with soil and talus; few thin outcrops of ostracodal limestone near base.

Unit 95: Limestone.

Unit 94: Mostly covered. Scattered fragments of green mudstone and a few very thin outcrops of siltstone.

Unit 93: Sandstone, fines upward (140 to 125 microns).

Unit 92: Mainly covered. Abundant fragments of green mudstone. Some beds of limestone, siltstone and sandstone.

Unit 91: Sandstone, 110-135 microns. Base sharp and flat, well-exposed ripples throughout.

Unit 89: Limestone, mudstone and sandstone.

Unit 88: Mainly covered. Green mudstone crops out beneath unit 89.

Unit 87: Limestone (?). Silty micrite (?), fine-grained to moderately silty, very calcareous.

Unit 86: Sandstone, 140 microns. Structureless.

Unit 85: Lower two-thirds is 140 micron sandstone, bed thickness less than 0.8 in. Upper one-third limestone.

Unit 84: Mainly covered. Abundant green mudstone fragments and green mudstone beneath unit 85.

Unit 83: Sandstone, 100 microns.

Unit 82: Mudstone. Greenish gray, poorly exposed.

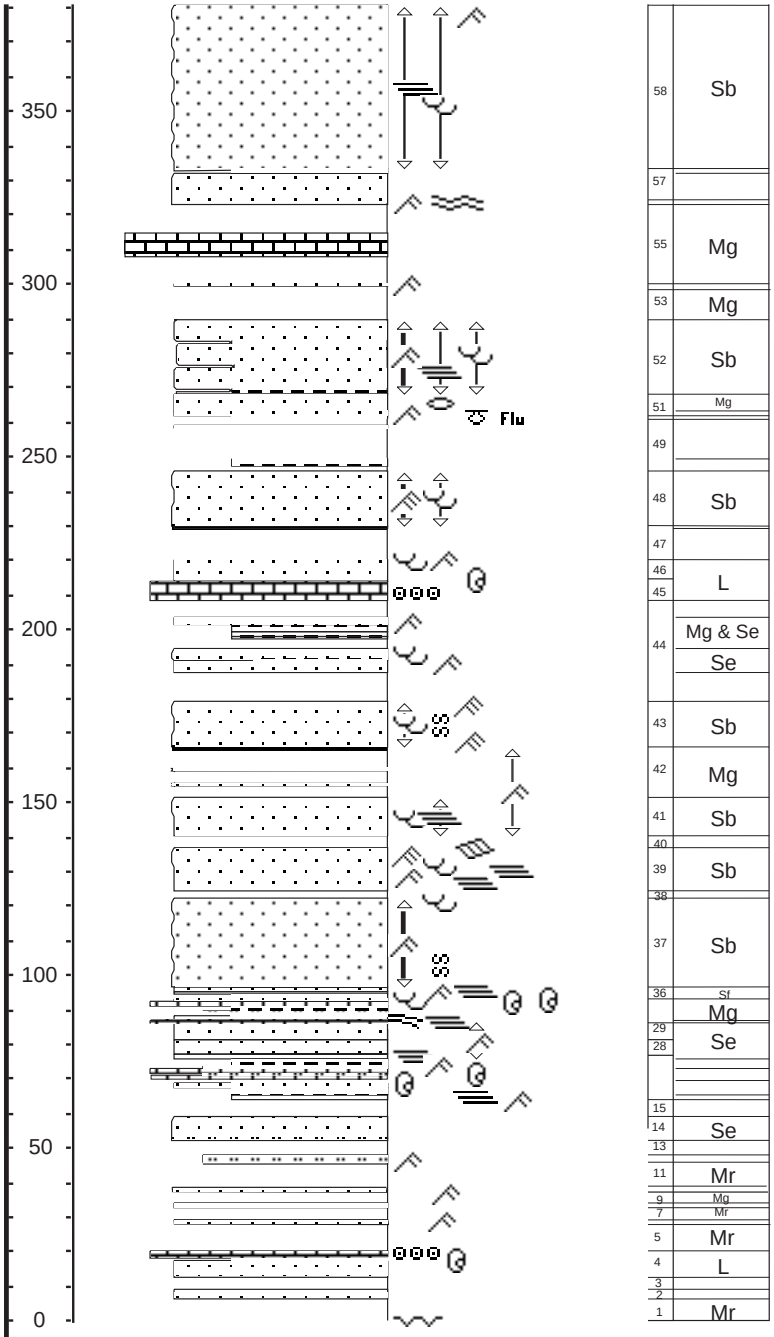
Unit 81: Sandstone, mainly 150 microns, top 7.9 in. is 80 microns. Mostly structureless, except ripples(?) in top 7.9 in.

Unit 80: Interbedded sandstone (< 100 microns), siltstone and green mudstone

Unit 79: Covered.

Unit 78: Limestone. Lower half consists of large (up to 23.6 in.) domal stromatolites; upper half consists of pillar-type stromatolites.

Unit 77: Limestone. Mainly ostracodal grainstone. Top 11.8 in. is siltstone containing ostracodes.



Unit 76: Limestone, siltstone and sandstone. Overall unit coarsens upward.

Unit75: Interbedded sandstone (<100 microns) and green mudstone.

Unit 74: Sandstone, 90-125 microns. Base dips 15 degrees WNW; ripples and planar laminations with low-angle truncations and minor trough cross-beds.

Unit 73: Covered. Abundant green mudstone fragments and green mudstone beneath unit 74.

Unit 72: Limestone. Ostracodal grainstone, small pillar-type stromatolites at base.

Unit 71: Siltstone, coarse-grained. Poorly exposed.

Unit 70: Sandstone, fines upward (160-110 microns). Scours all of unit 69 and part of unit 68 in places. Consists of two subunits: (1) basal lag deposit 0 to few feet thick, small to large angular framents of limestone from unit 69, IFC as multiple lenses, matrix of well-sorted 160 micron sand, planar laminations with low-angle truncations and ripples; (2) upper zone of 120-110- micron sandstone, 6.6 to 13.1 feet thick, lateral-accretion bedding cuts through subunit 1 and into unit 68 downdip, multiple internal scours and ripples (wave?), thin green mudstone interbed and thin IFC lens at top.

Unit 69: Limestone. Basal 3.3 feet is ostracodal grainstone; top 15.9 in. is silty micrite (?) containing ostracodes.

Unit 68: Sandstone and Siltstone. Basal 23.6 in is rippled sandstone (100-130 microns); Top 3.3 feet is interbedded sandstone and siltstone.

Unit 67: Mainly covered. Similar to unit 65.

Unit 66: Upper half mainly ostracode grainstone and lower half mainly thin bedded siltstone.

Unit 65: Mainly covered. Numerous thin outcrops of rippled siltstone and ostracodal limestone.

Unit 64: Sandstone, 90 microns. Sparse to abundant clasts in upper half.

Unit 63: Covered. Abundant green mudstone fragments.

Unit 62: Sandstone, fines upward (190-125 microns). 19.7 in. of basal scour; some troughs have oversteepened cross-beds. Sedimentary structures are not well exposed.

Unit 61: Mainly covered. Thick soil and abundant float. A few beds sandstone, siltstone and mudstone.

Unit 60: Sandstone, 125-155 microns.

Unit 59: Mainly covered. Thick soil and abundant talus; two beds of ostracodal limestone and micrite; friable very fine grained sandstone at top.

Unit 58: Sandstone, most of unit is 120-150 microns, upper 6.6 feet is 110 microns. Probably composite amalgamated sandbody containing scattered internal IFC zones and mulitple internal scoured sandstone-sandstone and sandstone-mudstone contacts. Most of unit contains planar laminations with low-angle truncations, few log impressions; basal 9.8 feet exhibit lateral accreation bedding, beds dip northeast.

Unit 57: Mainly covered. Top 19.7 in. is interbedded sandstone, siltstone, and mudstone.

Unit 56: Sandstone, 70-150 microns.

Unit 55: Covered. Green soil and green mudstone chips suggests unit is green mudstone.

Unit 54: Sandstone, 100 microns.

Unit 53: Covered. Green soil and green mudstone fragments suggests unit consists of greenish-gray mudstone.

Unit 52: Sandstone, 100-110 microns. Few thin mudstone interbeds. Numerous stacked and mutually truncating lenticular 32.8-49.2 foot sandbodies.

Unit 51: Interbedded Sandstone (65 microns) and mudstone. Bed thickness 7.9 in. or less.

Unit 50: Sandstone, 100 microns. Base contains sole marks, load structures, and tool marks or flute casts.

Unit 49: Mainly covered. A couple mudstone beds and a thin bed of fine-grained sandstone.

Unit 48: Sandstone, coarsens upward (65 to 110 microns).

Unit 47: Mainly covered. One 7.9 in thick bed of 90 micron sandstone and mudstone.

Unit 46: Sandstone, 100-120 microns. Complex interlensing of sandstone and lesser ostracodal limestone and limestone with limestone intraclasts. Individual beds are discontinuous. Unit thickens to the east.

Unit 45: Limestone. Basal 7.9 in. is sandy ostrocodal grainstone, most of unit is a dark-yellowish-orange micrite.

Unit 44: Partly exposed interval of sandstone, mudstone, and siltstone. Interval is 60 percent covered.

Unit 43: Sandstone, 120-130 microns. Unit contains large scale trough cross-beds and soft-sediment deformation.

Unit 42: Mostly covered. Four to five thin outcrops of fine-grained rippled sandstone.

Unit 41: Sandstone, 120-130 microns.

Unit 40: Covered. Greenish-gray mudstone and fissile medium-grained siltstone beneath the soil.

Unit 39: Sandstone 110-150 microns. Basal 31.5 in. contains planar laminations that have parting lineations; 31.5 in. to 5.7 ft. contains trough cross-beds, ripples, and some planar lamination; upper 6.39 ft. contains trough cross-beds, 3-D current ripples and some climbing ripples.

Unit 38: Mainly covered. Unit forms bench between ledges formed by units 37 and 39.

Unit 37: Sandstone, 100-160 microns. Base sharp, tool marks and load structures; massive except one distinct 7.9 in. bed about 6.6 feet above base that contains soft-sediment deformation and one distinct 9.8 in bed at top that contains ripples and few cross-beds.

Unit 36: Interbedded mudstone, sandstone, and ostracodal limestone. Beds are lenticular and contain local concentrations of carbonized wood or small clasts of sandstone and limestone.

Unit 35: Limestone and sandstone. Sandy limestone grades upward to 65 micron sandstone; trough cross-beds or scours throughout; linguoid ripples at top of unit. Unit grades laterally into interval consisting of complex mix of sand and ostracodes having no vertical trends.

Unit 34: Mudstone. Greenish-gray, ostracodes in places, weathers into small angular fragments.

Unit 33: Siltstone, coarse-grained. Structureless.

Unit 32: Mudstone, Green.

Unit 31: Sandstone, 110 microns. Sharp base, poorly exposed.

Unit 30: Limestone. Mainly ostracodal grainstone, base sharp, 3.9 in. basal scour; contains ripples, planar laminations, and hummocky cross-stratification; limestone is sandy, amount of sand increases upward; upper third of unit consists of interbedded sandstone (<130 microns) and limestone.

Unit 29: Sandstone, 115 microns. Base sharp, 1.9-2.4 in. of basal scour, top sharp, rippled (type unknown).

Unit 28: Sandstone. Four beds (base to top). (1) 3.9 in., structureless, 110 microns, (2) 1.9 in., structureless, 110 microns, (3) 21.7 in., 100 micron sandstone that grades through siltstone to 1.9 in. of green mudstone, structureless, (4) 15.7 in., 150 micron sandstone at base, most is 70 micron, rippled at top.

Unit 27: Mudstone, fine-grained. Greenish-gray, slightly calcareous.

Unit 26: Sandstone, fines upward (130 to 70 microns). Unknown ripples and unknown planar laminations, top sharp.

Unit 25: Interbedded mudstone and siltstone.

Unit 24: Siltstone. Relatively sharp base and top.

Unit 23: Limestone. Dark-gray micrite containing ostracodes.

Unit 22: Siltstone. Gradational with unit 21, sharp top, contains ostracodes.

Unit 21: Limestone. Ostracodal grainstone.

Unit 20: Mudstone. Green, poorly exposed.

Unit 19: Sandstone, 100 microns. Sharp base, unknown wave ripples.

Unit 18: Mudstone, greenish-gray.

Unit 17: Limestone. Mainly ostracodal grainstone, base sharp and slightly scoured, top sharp; 3.9-13.8 in. above base thin siltstone interbeds; 7.9-13.8 in. above base horizontally laminated; top 5.9 in. mainly structureless, faint ripples in places.

Unit 15: Mostly covered. Beneath unit 16 is green mudstone overlain by 5.9-inch-thick bed of silty limestone or very calcarous siltstone.

Unit 14: Sandstone, 90 microns. Wave ripples, burrows on some bedding planes.

Unit 13: Mainly covered, top 13.8 in. is friable 65 micron sandstone that grades into unit 14. Sandstone is massive and structureless.

Unit 12: Siltstone, coarse-grained. Base gradational over 3.9 in. with underlying red mudstone, rippled (?).

Unit 11: Covered. Red mudstone crops out beneath unit 12.

Unit 10: Base and top sharp and irregular (0-1.9 in of relief), faint ripples. 100 mircons.

Unit 9: Covered. Green mudstone crops out beneath unit 10.

Unit 8: Well-exposed wave ripples (wave ripples have chevrons, bidirectional cross-laminations, bundled upbuilding, and irregular and undulatory ripple-set boundaries). 90 microns.

Unit 7: Covered. Red soil suggests red mudstone.

Unit 6: Rippled, base fairly sharp, breaks into thin wavy plates. 65 microns.

Unit 5: Deep soil, red mudstone cropping out beneath unit 6 and red color of soil suggest unit is red mudstone.

Unit 4: Interbedded limestone, sandstone and mudstone.

Unit 3: Covered. Some green mudstone fragments on surface.

Unit 2: Base grades upward to finer grained sandstone. 100 microns.

Unit 1: Covered. Fragments of mudcracked red mudstone at base.

LEGEND

LITHOLOGY

 Sandstone

 Siltstone

 Mudstone

 Limestone

 Covered Slope

 Shale

 Dolostone

CONTACTS

Sharp

PHYSICAL STRUCTURES

- Trough Cross-Strat.
- Wavy Laminations
- Convolute Bedding
- Load Casts
- Ripples
- Wave Ripples
- Algal Stromatolite
- Climbing Ripples
- Lenticular Bedding
- Mudcracks
- Flute Casts
- Current Ripples
- Pillar-Type Stromatolite
- Planar Lamination
- Hummocky Cross-Strat.
- Synaeresis Cracks
- Soft-Sediment Deformation
- Intraformational Conglomerate (IFC)

LITHOLOGIC ACCESSORIES

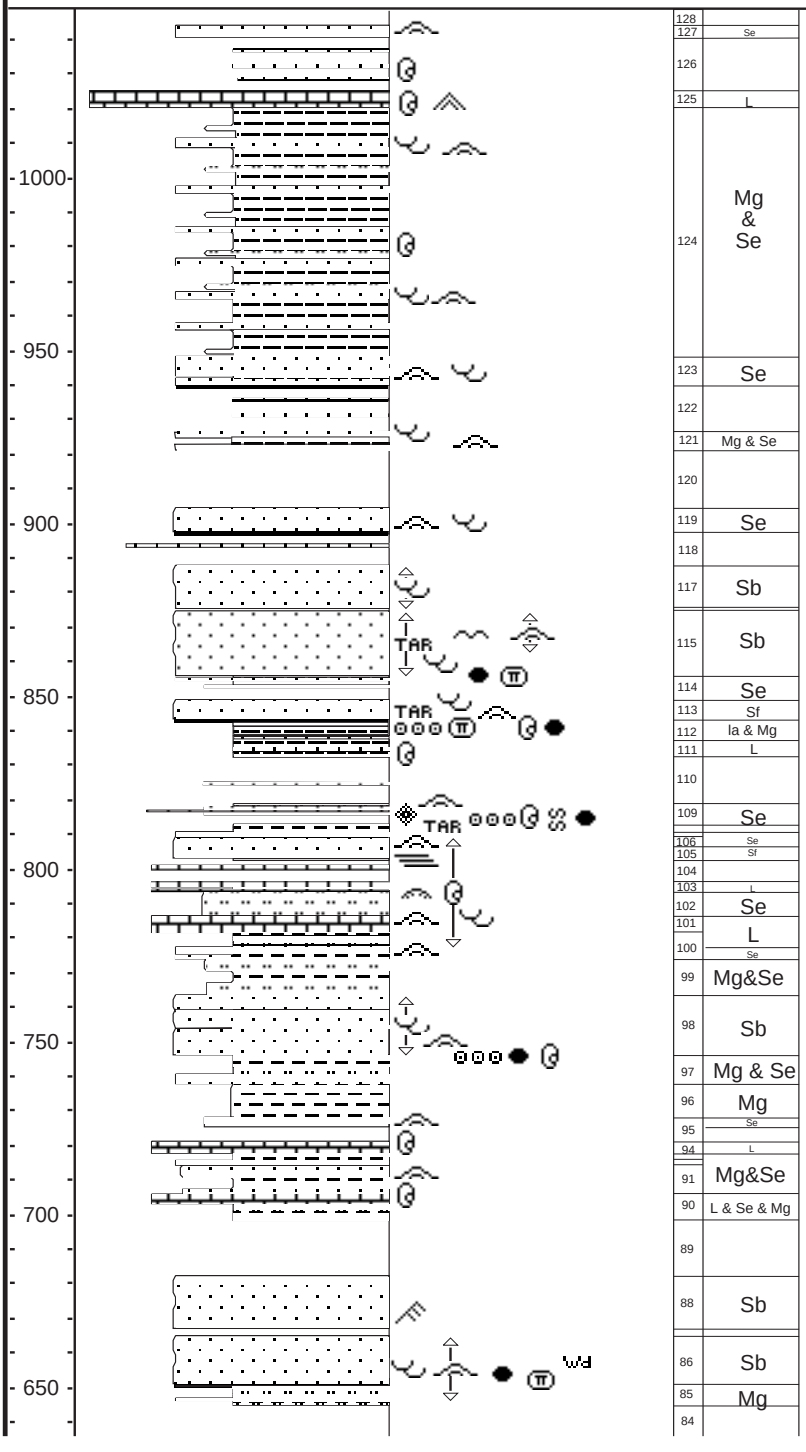
- Oolites
- Coated Grains

FOSSILS

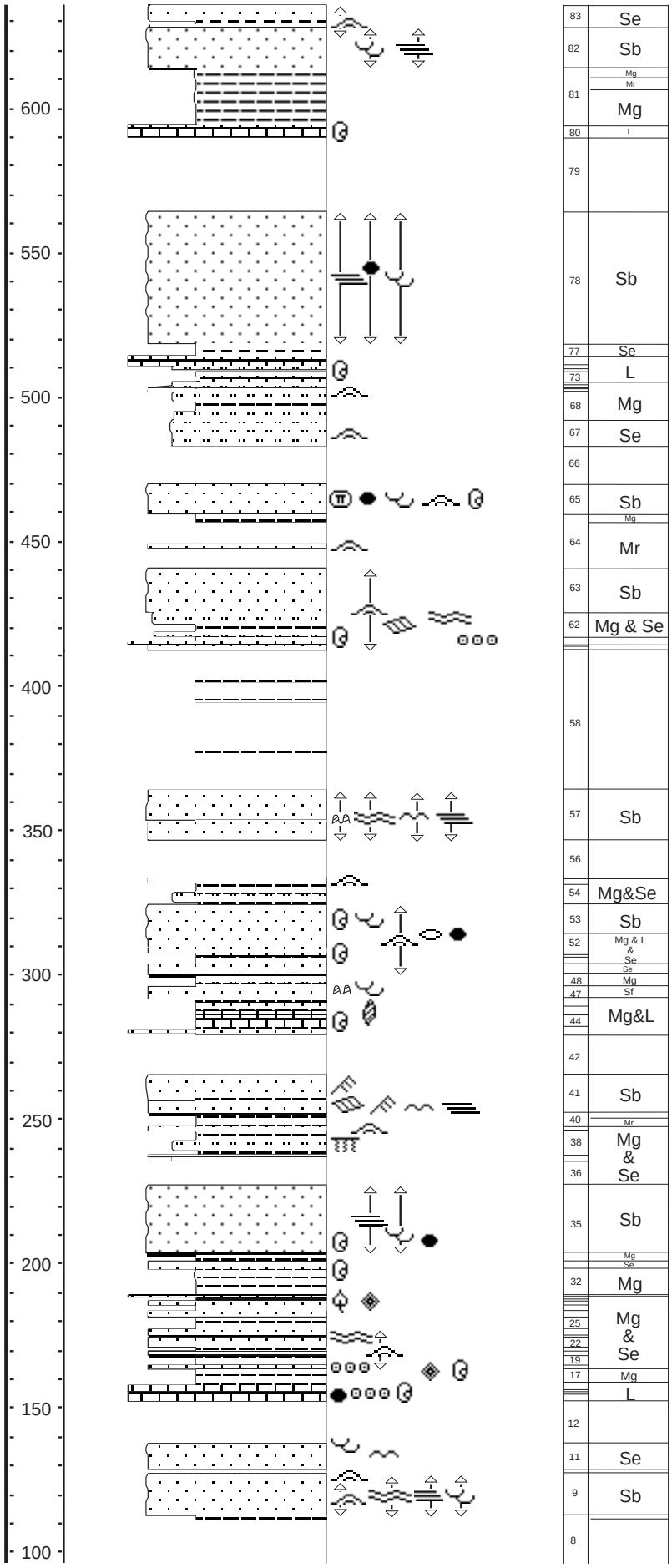
- Fish Scales
- Ostracodes

Remy 8

The section is located in Nine Mile Canyon, beginning in the SW1/4NW1/4 and ending in the NW1/4NW1/4 section 4, T. 12 S., R. 14 E., of the Salt Lake Base line and Meridain, Duchesne County, Utah.



UNIT NUMBER	FACIES	Unit Number - Lithologic description
128		Unit 128: Covered.
127	Se	Unit 127: Sandstone, 130 microns. Base not exposed.
126		Unit 126: Mainly covered. Few thin outcrops of silty limestone or calcareous mudstone, some contain ostracodes.
125	L	Unit 125: Limestone. Lower two-thirds consists of pillar-type stromatolites; upper third is hard, light-gray to yellow micrite containing ostracodes.
124	Mg & Se	Unit 124: Interbedded mudstone and siltstone (70-80 percent) and sandstone (20-30 percent). Sandstone is 80-120 microns.
123	Se	Unit 123: Sandstone, most is 100-150 microns, basal bed 220 microns. Bed thickness 3.9-23.6 inches.
122		Unit 122: Mainly covered. Scattered outcrops of silty micrite.
121	Mg & Se	Unit 121: Interbedded 90-125 micron sandstone and mudstone. Mudstone is green and is present as thin discontinuous interbeds in sandstone and as one 19.7-inch-thick bed.
120		Unit 120: Mainly covered.
119	Se	Unit 119: Sandstone, 100-125 microns. Sandstone beds are amalgamated (?).
118		Unit 118: Mainly covered. Thin bed of silty micrite in center; greenish-gray mudstone containing few-inch-thick tuff(?) crops out near top.
117	Sb	Unit 17: Sandstone, 125-135 microns. Base covered.
115	Sb	Unit 116: Covered. Probably greenish-gray mudstone.
114	Se	Unit 115: Sandstone, 110-275 microns. Basal 3.9-11.8 inches consists of 275 micron sandstone containing laminated yellow mudstone clasts and fish scales overlain by 220 micron sandstone that scours into basal bed; upper 18 feet fines upward (275-110 microns).
113	Sf	Unit 114: Interbedded mudstone, siltstone and sandstone. Lower half is covered; mudstone is green.
112	Ia & Mg	Unit 113: Sandstone, 124-150 microns. 11.8-15.7 in. of basal scour in places; unit thickens to the west; tar saturated.
111	L	
110		
109	Se	
106	Se	
105	Sf	
104		
103	L	
102	Se	
101	L	
100	Se	
99	Mg&Se	
98	Sb	
97	Mg & Se	
96	Mg	
95	Se	
94	L	
91	Mg&Se	
90	L & Se & Mg	
89		
88	Sb	
86	Sb	
85	Mg	
84		



Unit 112: Interbedded mudstone, siltstone, and limestone. Lower half of unit is interbedded greenish-gray mudstone and light-gray siltstone; upper half is interbedded-interlaminated light-brown mudstone, siltstone, and thin carbonate beds consisting of carbonate intraclasts, ooids, ostracodes, and fish scales; contacts between beds are sharp to gradational.

Unit 111: Interbedded mudstone and limestone. Basal 11.8 in. is mudstone with minor ostracodes; 11.8-19.7 in. is ostracodal limestone; 19.7-31.5 in. is green mudstone; 31.5 in. to top is ostracodal limestone; top 1.2-1.6 in. is micrite.

Unit 110: Mainly covered. One bed of sandstone.

Unit 109: Interbedded sandstone, siltstone and limestone. Basal 19.7 in. is 130 micron sandstone containing 5-10 percent carbonate grains; 19.7-21.7 in. is yellow, sandy, ostracodal limestone; 21.7-31.5 in. is poorly sorted 100 micron sandstone, base is 160 microns; 31.5-39.4 in. above base is siltstone; 39.4 in. to top is 100 micron sandstone.

Unit 108: Mainly covered. Some green mudstone in places.

Unit 107: Sandstone, 150 microns. Yellow carbonate grains near base; upper half of unit is tar saturated; sedimentary structures indistinct, probably ripples.

Unit 106: Sandstone, 70-130 microns. Forms series of sandstone ledges and soil-covered slopes. Bed thickness less than 7.9

Unit 105: Sandstone, coarsens upward (70 to 85 microns).

Unit 104: Mainly covered. One 11.8-inch-thick bed of dark-gray limestone containing ostracodes and fossils; a 9.8-inch-thick bed medium-greenish-gray, fissile, calcareous shale; one thin bed of siltstone.

Unit 103: Interbedded limestone, mudstone, and siltstone. Basal 8.5 in. is domal algal stromatolite, domes about 19.7 in. width; 8.5-13.4 in. above base is greenish-gray mudstone and siltstone; 13.4-18.1 in. is algal laminated limestone; 18.1 in. to top is ostracodal grainstone.

Unit 102: Siltstone. Contains ostracodes, poorly exposed.

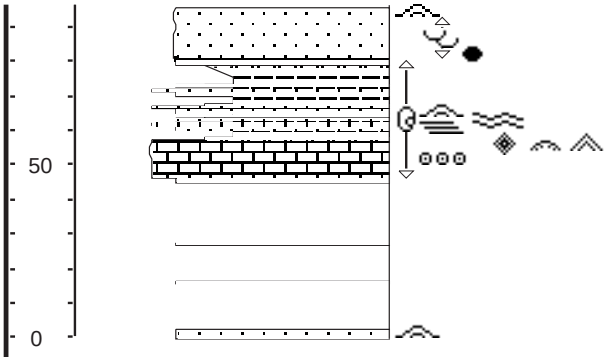
Unit 101: Limestone. Ostracodal grainstone.

Unit 100: Sandstone, siltstone, mudstone, and limestone. Basal 3.6 feet is mainly sandstone and a few thin mudstone beds; upper 3.9 feet of unit consists of interbedded-interlaminated ostracodal grainstone and lesser greenish-gray mudstone and siltstone, bed thickness few millimeters to 7.9 inches.

Unit 99: Interbedded mudstone and siltstone. Poorly exposed; mudstone is green.

Unit 98: Sandstone, fines upward (140 to 110 microns). Base is sharp and scoured, in places base of unit contains IFC (clast-supported in places) composed of carbonate, siltstone, and mudstone clasts, base also contains scattered bone fragments; weakly tar saturated.

Unit 97: Interbedded sandstone, siltstone, and mudstone. Contacts between rock types are gradational. Mudstone is green.



Unit 96: Mudstone. Greenish-gray. Silty, amount of silt increases upward.

Unit 95: Siltstone. Lower two-thirds poorly exposed; upper third rippled.

Unit 94: Limestone. Yellow ostracodal grainstone; unit thins toward east.

Unit 93: Mudstone and siltstone. Greenish-gray mudstone grades upward to siltstone.

Unit 92: Sandstone, 70 microns.

Unit 91: Interbedded sandstone-siltstone and mudstone. Mean bed thickness 7.9 in.; most sandstone beds are structureless, mudstone is greenish-gray; contacts between beds are sharp.

Unit 90: Mudstone, siltstone, and limestone. Basal greenish-gray mudstone grades upward to very coarse grained siltstone through silty ostracodal limestone to silty micrite(?).

Unit 89: Covered.

Unit 88: Sandstone, 80-100 microns. Unit forms a series of sandstone ledges and soil-covered slopes.

Unit 87: Covered.

Unit 86: Sandstone, 90-140 microns. 19.7 in. of basal scour, basal 19.7 in. contains scattered mudstone intraclasts; lenticular zones of mudstone clasts above base, internal scours, one zone contains abundant wood impressions; basal 9.5 feet consists of 110-140 micron sandstone ; top 4.9 feet consists of 90 micron sandstone.

Unit 85: Greenish-gray mudstone and lesser siltstone and sandstone. Sandstone and siltstone are rippled.

Unit 84: Covered. Probably greenish-gray mudstone.

Unit 83: Interbedded sandstone (very fine grained) and mudstone. Sandstone beds are 15.7-19.7 in. thick; mudstone is greenish-gray.

Unit 82: Sandstone, mainly 130-175 microns, some 95 micron.

Unit 81: Mudstone. Mainly greenish-gray, poorly exposed; top 6.5 feet consists of purple mudstone that grades upward to gray mudstone that grades upward to greenish-gray mudstone.

Unit 80: Limestone. Silty micrite(?).

Unit 79: Covered.

Unit 78: Sandstone (100-135 microns) and minor mudstone. Complex sand body: (1) upper two-thirds fines upward overall, probably contains multiple smaller scale fining upward sequences, (2) lower one-third consists of thick sandstone beds separated by lenticular greenish-gray mudstone,whereas upper two-thirds consists of multiple lenticular amalgamated sandstone beds, (3) lateral-accretion bedding, (4) multiple channel-like scours within unit, (5) some planar laminations and trough cross-beds, altogether sedimentary structures are generally not well exposed.

Unit 77: Mudstone. Greenish-gray.

Unit 76: Limestone. Olive-gray micrite(?) containing minor ostracodes(?).

Unit 75: Siltstone.

Unit 74: Covered.

Unit 73: Limestone and mudstone. Silty micrite and one 5.9-inch-thick bed of mudstone.

Unit 71: Sandstone. Base slightly irregular.

Unit 70: Mudstone. Greenish-gray.

Unit 69: Sandtone. Base irregular.

Unit 68: Siltstone and mudstone, greenish-gray, poorly exposed.

Unit 67: Siltstone.

Unit 66: Covered.

Unit 65: Sandstone, 125-145 microns. Base coverd. Numerous irregular intervals containing IFC; sandstone beds are 11.8-19.7 in. thick, amalgamated in places, and separated by lenticular, thin, green mudstone interbeds; numerous internal truncations; log impressions, trough cross-beds, ripples, HCS(?), and intervals containing 10-15 percent ostracodes.

Unit 64: Mainly covered. Red mudstone under thin soil cover; 15.7-inch-thick bed of 70 micron sandstone; top 3 feet is mudstone.

Unit 63: Sandstone, 100 micron. 7.9-11.8 in. of basal scour; bed thins toward the east where it contains several thin mudstone interrbeds and is partially truncated by sandstone beds with lateral-accretion bedding.

Unit 62: Interbedded mudstone (40 percent) and sandstone-siltstone (60 percent). Sandstone-siltstone bed range in size from coarse grained siltstone to 120 micron sandstone. Mudstone is greenish-gray.

Unit 61: Limestone and mudstone. Mainly ostracodal grainstone that grades upward to green mudstone, and grades downward to silty micrite.

Unit 60: Mudstone, greenish-gray.

Unit 59: Sandstone, 130 microns.

Unit 58: Mainly covered. Several thin beds of siltstone; green and red soil suggests unit is mainly green and red mudstone.

Unit 57: Sandstone, 80-90 microns. At base of unit sandstone beds dip 13° N. 60° E. Suggests lateral-accretion bedding.

Unit 56: Covered. Greenish-gray soil and fragments of greenish-gray and red mudstone suggests unit consists of mudstone.

Unit 55: Sandstone, 60-70 microns. Greenish.

Unit 54: Interbedded greenish-gray mudstone and siltstone.

Unit 53: Sandstone, generally 90-100 microns, some zones of 150 microns. Base irregular, lenticular beds of mudstone and IFC at base; 90-100 micron sandstone is rippled; 150 micron sandstone is trough cross-bedded.

Unit 52: Interbedded sandstone(60-70 microns), and lesser siltstone, mudstone, and limestone. Sandstones contain small channels in places.

Unit 51: Limestone. Ostracodal grainstone, contact gradational with unit 50 from greenish-gray mudstone to yellowish ostracode-rich mudstone to ostracodal grainstone. Parts of unit 51 truncated by channels filled with mudstone.

Unit 50: Mudstone. Greenish-gray.

Unit 49: Sandstone, 100 micron. Top is scour filled with green mudstone, faint dipping laminations.

Unit 48: Interbedded mudstone and sandstone-siltstone. Greenish-gray mudstone contains several thin sandstone and siltstone beds.

Unit 47: Sandstone, 90-110 microns.

Unit 46: Interbedded mudstone and limestone. Basal 15.7 in. is greenish-gray mudstone; 15.7-31.5 in. is hard gray micrite; 31.5 in. to top is siltstone or mudstone.

Unit 45: Interbedded limestone and mudstone. Slightly scoures unit 43. Unit consists of ostracodal grainstone.

Unit 44: Interbedded mudstone and sandstone (70 micron). Sandstone beds structureless.

Unit 43: Limestone. Mainly ostracodal grainstone; 3.1-inch-thick bed of mudstone 7.9 in. above base; 1.9-inch-thick of interlaminated green mudstone and limestone 11.8 in. above base.

Unit 42: Covered. Minor green mudstone crops out beneath unit 43.

Unit 41: Sandstone, coarsens upward lightly (95 to 105 microns). 3.9-5.9 in. of scour, carbonate grains at base. One 7.9 in. bed of mudstone.

Unit 40: Mudstone. Lower half green and purple; upper half fissile green mudstone to shale.

Unit 39: Sandstone, 70 micron.

Unit 38: Interbedded greenish-gray mudstone and siltstone. Syneresis cracks(?) in mudstone.

Unit 37: Sandstone and siltstone. Medium-grained siltstone grades upward to 90 micron structureless sandstone.

Unit 36: Mainly covered.

Unit 35: Sandstone, 110-140 microns. Scours unit 33 and 32 and part of 31, basal scour irregular and contains IFC, ostracodes(up to 50 percent).

Unit 34: Mudstone. Greenish-gray.

Unit 33: Sandstone, 70-80 microns. Transitional with unit 32.

Unit 32: Mudstone. Greenish-gray.

Unit 31: Limestone. Ostracodal grainstone.

Unit 30: Mudstone. Greenish-gray.

Unit 29: Sandstone, siltstone, and shale. Basal 0.8 in. is 100 micron sandstone that grades upward to siltstone to light-gray paper shale that contains leaf impressions and carbonized twigs.

Unit 28: Sandstone. Grades upward from unit 26 through brownish siltstone to brown 90 microns sandstone.

Unit 27: Mudstone. Greenish-gray.

Unit 26: Interbedded sandstone (up to 100 microns) and siltstone seperated by a thin bed of mudstone.

Unit 25: Mudstone. Greenish-gray.

Unit 24: Sandstone, 70-80 microns.

Unit 23: Mudstone. Green.

Unit 22: Sandstone, 80 microns.

Unit 21: Mudstone, greenish-gray.

Unit 20: Sandstone, 160 microns. Thin greenish-gray mudstone beds in places.

Unit 19: Interbedded mudstone and siltstone. Mudstone is greenish-gray.

Unit 18: Sandstone, 125 microns.

Unit 17: Mudstone and siltstone. Top 7.9 in. is siltstone containing carbonaceous debris and yellowish grains.

Unit 16: Limestone. Two beds of gray micrite or fine-grained mudstone seperated by 2.95 in. bed of dark-brown, fissle, calcarous shale.

Unit 15: Limestone. Type uncertain, may contain recrystallized carbonate grains.

Unit 14: Dolostone. Dark-gray, some zones kerogenous (oil shale).

Unit 13: Limestone. Silty micrite(?), contains ostracodes, ooids, and limestone intraclasts; top 1.9-3.9 in. is ostracodal grainstone.

Unit 12: Covered.

Unit 11: Sandstone, 80-100 microns.

Unit 10: Covered.

Unit 9: Sandstone, 95-110 microns.

Unit 8: Mainly covered. Green mudstone crops out beneath unit 9.

Unit 7: Sandstone, 80-105 microns. 3 feet of scour, sedimentary structures poorly exposed, probably trough cross-beds or small channels.

Unit 6: Interbedded mudstone, siltstone, sandstone, and minor limestone. Mudstone is green, gray, and purple and exhibits lateral and vertical color transitions; sandstone has sharp and flat to scoured bases and is structureless, less than 125 microns; siltstone beds have irregular and gradational bases and tops; few thin ostracodal limestone beds are wavy planar laminated and rippled.

Unit 5: Limestone. Carbonate clasts and ostracodes; grades upward into silty micrite; top 3.9 in. is domal-and pillar type stromatolites.

Unit 4: Limestone. Micrite, medium-brownish-gray to dark-gray, poorly exposed, small carbonized twigs in places.

Unit 3: Limestone. Basal 27.5 in. is ostracode grainstone; 27.5-61 in. is silty micrite; 61 in. to top is ooid grainstone.

Unit 2: Mainly covered. Several thin sandstone beds crop out, greenish-gray soil suggests interval is green mudstone.

Unit 1: Sandstone. Coarsens upward.

LEGEND

LITHOLOGY

CONTACTS

Sharp

PHYSICAL STRUCTURES

- Trough Cross-Strat.
- Lenticular Bedding
- Soft-Sediment Deformation
- Combined-Flow Ripples
- Algal Stromatolites
- Climbing Ripples
- Synaeresis Cracks
- Wavy Laminations
- Wave Ripples
- Pillar-Type Algal Stromatolites
- Planar Lamination
- Ripples
- Intraformational Conglomerate (IFC)
- Current Ripples

LITHOLOGIC ACCESSORIES

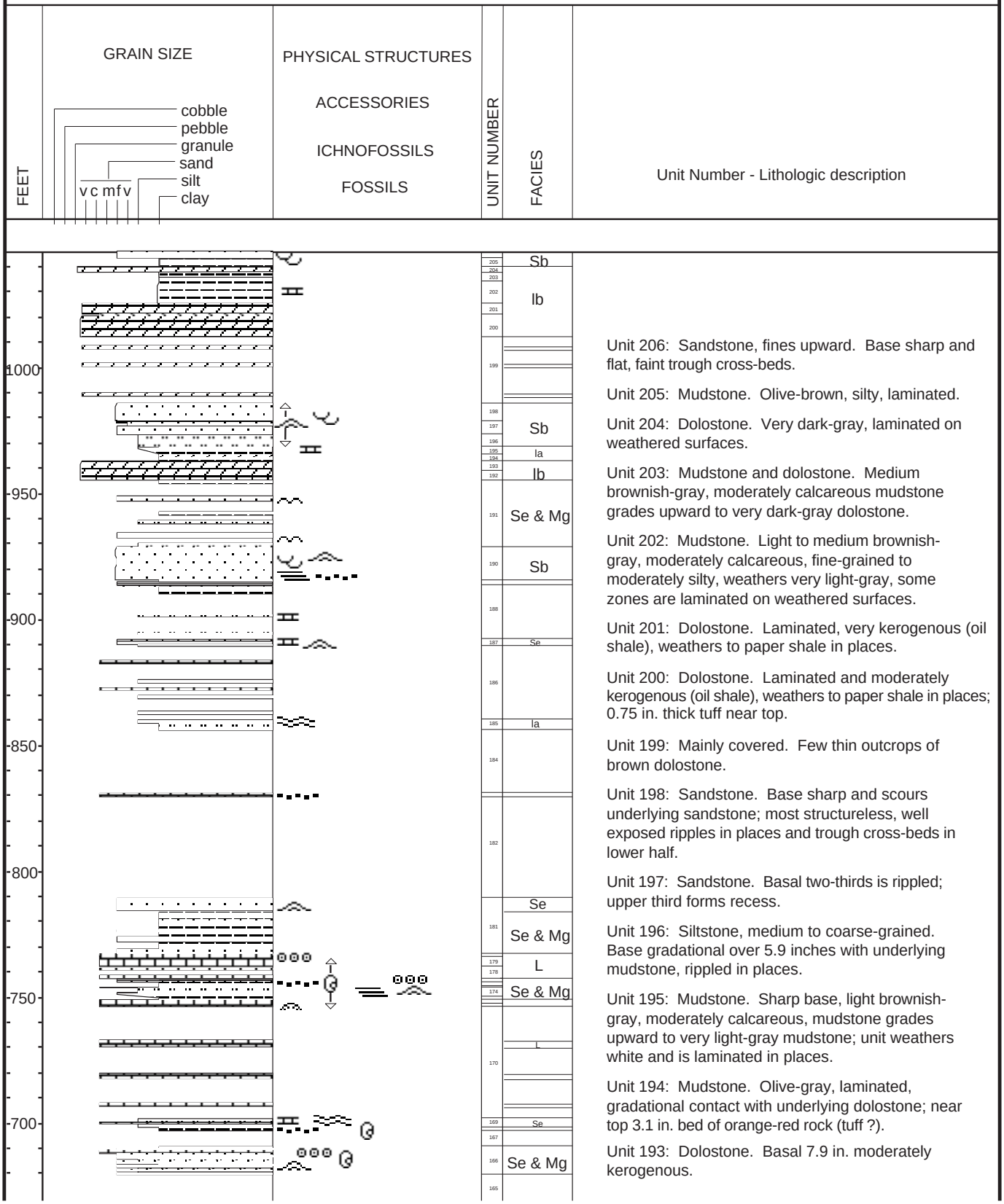
- Oolities
- Tar
- Wood Fragments

FOSSILS

- Plant Remains
- Carbonized Fossils (undifferentiated)
- Gastropods
- Fish Scales
- Ostracodes

Remy 9

The section is located in Nine Mile Canyon, beginning in the SE1/4SW1/4 section 8 and ending in the NW1/4SW1/4 section17, T. 12 S., R. 16 E., of the Salt Lake Base line and Meridian, Duchesne County, Utah.



Unit 206: Sandstone, fines upward. Base sharp and flat, faint trough cross-beds.

Unit 205: Mudstone. Olive-brown, silty, laminated.

Unit 204: Dolostone. Very dark-gray, laminated on weathered surfaces.

Unit 203: Mudstone and dolostone. Medium brownish-gray, moderately calcareous mudstone grades upward to very dark-gray dolostone.

Unit 202: Mudstone. Light to medium brownish-gray, moderately calcareous, fine-grained to moderately silty, weathers very light-gray, some zones are laminated on weathered surfaces.

Unit 201: Dolostone. Laminated, very kerogenous (oil shale), weathers to paper shale in places.

Unit 200: Dolostone. Laminated and moderately kerogenous (oil shale), weathers to paper shale in places; 0.75 in. thick tuff near top.

Unit 199: Mainly covered. Few thin outcrops of brown dolostone.

Unit 198: Sandstone. Base sharp and scours underlying sandstone; most structureless, well exposed ripples in places and trough cross-beds in lower half.

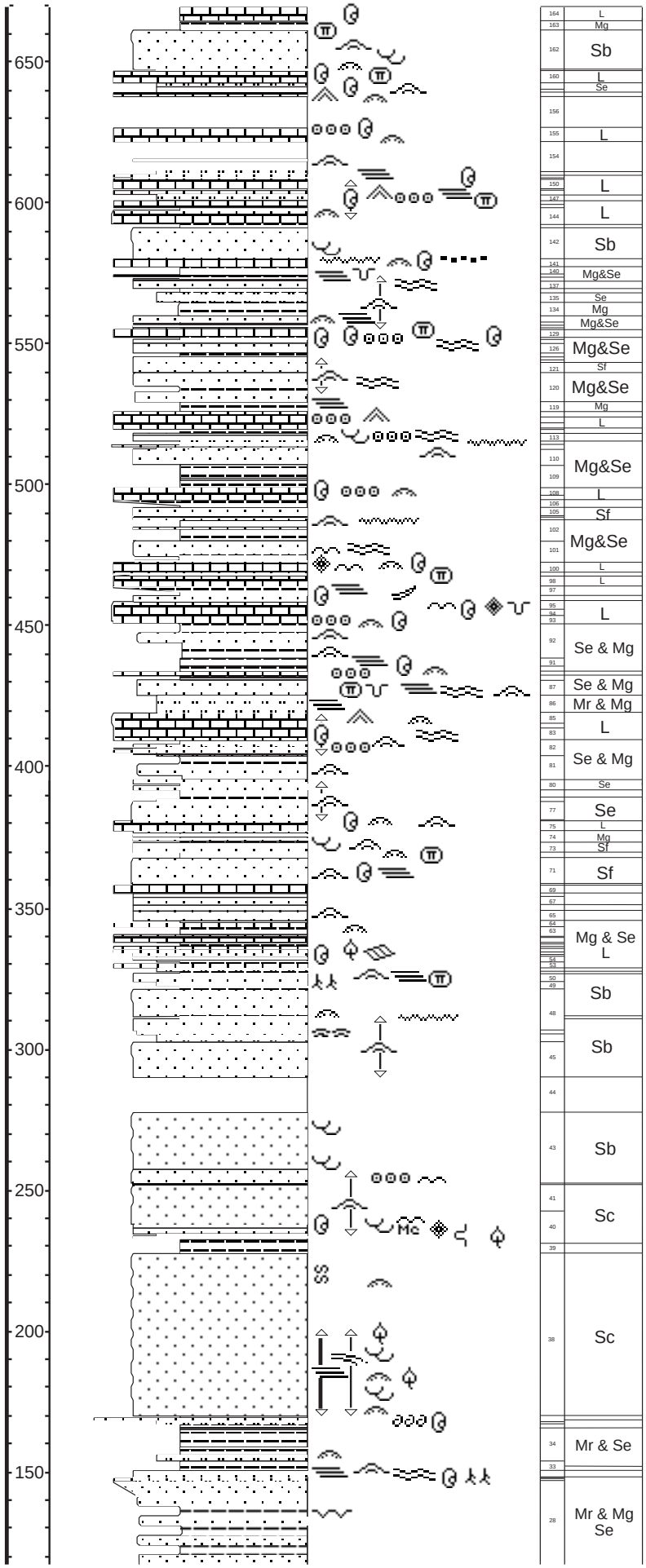
Unit 197: Sandstone. Basal two-thirds is rippled; upper third forms recess.

Unit 196: Siltstone, medium to coarse-grained. Base gradational over 5.9 inches with underlying mudstone, rippled in places.

Unit 195: Mudstone. Sharp base, light brownish-gray, moderately calcareous, mudstone grades upward to very light-gray mudstone; unit weathers white and is laminated in places.

Unit 194: Mudstone. Olive-gray, laminated, gradational contact with underlying dolostone; near top 3.1 in. bed of orange-red rock (tuff ?).

Unit 193: Dolostone. Basal 7.9 in. moderately kerogenous.



Unit 192: Dolostone. Laminated and very kerogenous (oil shale), weathers to paper shale in places.

Unit 191: Siltstone, sandstone, and mudstone. Much of unit covered; abundant siltstone and wave-rippled sandstone, and olive-gray mudstone in places.

Unit 190: Sandstone, fines upward. Base sharp, less than 11.8 in. of scour; 0-15.7-inch-thick zone containing mudstone clasts at base, minor trough cross-beds, ripples and planar laminations; mostly structureless.

Unit 189: Sandstone-siltstone and mudstone. Three beds of sandstone overlain by 7.9 in. thick bed of green mudstone and siltstone.

Unit 188: Mainly covered. Several outcrops of laminated to thinly bedded, light-gray calcareous siltstone; thin bed of mudstone crops out beneath unit 189.

Unit 187: Siltstone and sandstone. Basal 9.8 in. is calcareous siltstone; 9.8-19.7 in. is sandstone; 19.7 in. to top is structureless sandstone.

Unit 186: Mainly covered. Minor outcrops of light-gray laminated siltstone and light-gray carbonate rock.

Unit 185: Mudstone and siltstone. Laminated dark yellowish-brown mudstone grades upward to laminated, light-gray, fine-grained siltstone that grades upward to coarse-grained siltstone containing wavy planar laminations.

Unit 184: Covered. Abundant float of tar-saturated limestone, some ooids.

Unit 183: Limestone. Mainly of fine carbonate grains and larger grains and zones of brecciated laminated limestone.

Unit 182: Covered.

Unit 181: Sandstone and mudstone. Unit covered along section but lower 21.6 feet of interval exposed in nearby cliff where it consists of basal 6.6 feet interbedded green mudstone and fine-grained sandstone; 6.6-16.4 feet green mudstone and several sandstone-siltstone interbeds; 16.4-17.4 feet unidentified bed; 17.4-21.6 feet rippled sandstone.

Unit 180: Limestone. Grain supported ooids and ostracodes, base sharp and irregular.

Unit 179: Limestone. Micrite, white, very fine grained, laminated in few places, minor carbonate grains in places.

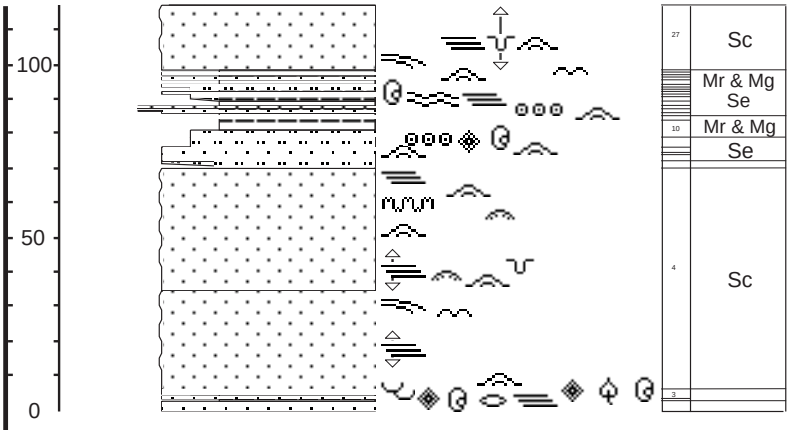
Unit 178: Mainly covered. One bed of ostracodal and ooid grainstone containg limestone clasts and one 5.9-inch-thick bed of brownish-gray micrite.

Unit 177: Sandstone and mudstone. Rippled sandstone breaks in slabs 0.8-3.1 in. thick; 5.9 -inch-thick bed of fissile green mudstone 3.9 in. from top.

Unit 176: Mudstone and siltstone. Basal 7.9 in. is fissile green mudstone; upper 11.8 in. is interbedded mudstone and siltstone.

Unit 175: Limestone. Base sharp; composed of ostracodes, small round carbonate grains and larger more angular limestone clasts.

Unit 174: Siltstone and sandstone. Base grades upward from mudstone to sandstone; top grades upward to coarse-grained siltstone; contains planar laminations and ripples.



Unit 173: Mudstone, greenish-gray.

Unit 172: Limestone. Basal 7.9 in. is lightyellowish-gray, composed of silt to very fine sand-sized carbonate grains and less than 10 percent ostracodes; upper 7.9 in. is interbedded limestone composed of ostracodes and other carbonate grains and limestone similar to basal 7.9 inches.

Unit 171: Limestone. Oncolites, angular fragments of laminated limestone, and small domal stromatolites in matrix of fine-grained limestone containing ostracodes.

Unit 170: Mainly covered. Few outcrops of thin bedded to laminated limestone, abundant green mudstone float on surface.

Unit 169: Siltstone and limestone. Siltstone is light-gray and moderately calcareous, contains wavy planar laminations, breaks into slabs .008-.04 in. thick, one 0-5.9-inch-thick bed of laminated limestone disrupts siltstone bed.

Unit 168: Mudstone and limestone. Basal 7.9 in. is green mudstone containing limestone clasts and thin limestone interbeds; basal mudstone grades upward to limestone composed of ostracodes and small spherical to oval limestone clasts.

Unit 167: Covered.

Unit 166: Interbedded sandstone, siltstone, mudstone, and limestone. Bed thickness 2-11.8 in.; sandstone and siltstone are rippled; mudstone is green; limestone is one 9.8 in. thick bed of silty micrite containing ooids and ostracodes.

Unit 165: Covered.

Unit 164: Limestone, ostracodal grainstone.

Unit 163: Mudstone. Green, poorly exposed.

Unit 162: Sandstone, fines upward (160 to 85 microns). Basal 19.7 in. contains abundant, small, well-rounded limestone clasts in matrix of 140-160 micron sand; IFC overlain by 29.5-39.4 in. interval of trough cross-beds overlain by ripples; top of unit contains abundant chert pebbles and fish scales.

Unit 161: Siltstone, medium-grained. Medium-gray, fissile.

Unit 160: Limestone. Silty micrite containing two intervals of ostracodes, two intervals of fish scales, relatively large bone fragments in center.

Unit 159: Siltstone. Laminated, on 3.5-inch-thick bed of rippled ostracodal grainstone near middle.

Unit 158: Siltstone. Light-gray, medium-grained, weathers like mudstone.

Unit 157: Limestone. Pillar-type algal stromatolites and small domal stromatolites at base, pillars generally 0.02 in. wide and 1.2-2.4 in. long and subparallel.

Unit 156: Covered.

Unit 155: Limestone. Basal 15.7 in. is silty micrite; 15.7-23.6 in. above base are grain-supported, small ,well-rounded limestone clasts; 23.6 in. to top is ostracodal grainstone containing some ooids and small zones with laminated limestone.

Unit 154: Mainly covered. Unit has one 9.1-inch-thick bed of 125 micron sandstone.

Unit 153: Siltstone and sandstone (160 microns). Thin-bedded siltstone, one sandstone bed in top 2 inches.

Unit 152: Limestone. Pillar-type algal stromatolites, pillars less than 0.02 in. in diameter.

Unit 151: Sandstone, 90 microns.

Unit 150: Limestone. Ooid grainstone in lower half grades upwards to ostracode grainstone.

Unit 149: Covered.

Unit 148: Limestone. Pillar-type stromatolites having ostracodes between pillars; some intervals ostracodal grainstone planar laminated.

Unit 147: Siltstone. Medium-gray, calcareous, rock breaks into thin slabs less than 0.6 in. thick.

Unit 146: Limestone. Silty micrite containing ostracodes, ooids and scattered fish scales; top 3.9 in. composed of limestone intraclasts.

Unit 145: Limestone. Composed of small domal algal stromatolites, pillar-type stromatolites and some subhorizontal laminations; top 2.8-3.9 in. is ostracodal grainstone.

Unit 144: Limestone. Mainly silty micrite (?). Base gradational over few inches; 23.6-35.4 in. contains ostracodes and some limestone clasts; 3.9-7.9 in. below top is micrite containing ooids and larger round grains as wide as 0.01 in.; top 3.9 in. is green mudstone.

Unit 143: Mudstone. Pale-green.

Unit 142: Sandstone, fines upward (200 to 150 microns). 3.9-5.9 in. of scour and contains scattered small limestone clasts; sedimentary structures poorly exposed; upper half of unit contains lateral accretion bedding that dips 14°N. 70°E.

Unit 141: Limestone. Ostracodal grainstone grades upward to silty micrite, in transition zone the limestone is laminated.

Unit 140: Mudstone. Green; top 5.9 in. contains scattered ostracodes, few patches with abundant ostracodes, and ostracode-filled burrows; top 3.9 in. is gradational with unit 141.

Unit 139: Sandstone (110 micron) and limestone. Sandstone containing ostracodes grades upward to ostracodal grainstone.

Unit 138: Interbedded sandstone (110 micron) and mudstone. Thin beds of rippled sandstone are separated by thinner green mudstone beds, mudstone beds are truncated by sandstone in places; top 5.9 in. is green mudstone.

Unit 137: Sandstone, fines upward (110-70 microns).

Unit 136: Mudstone. Greenish, unit thins to 3.9-5.9 in. 16.4 feet to the west.

Unit 135: Siltstone. Greenish-gray; green mudstone beds near top.

Unit 134: Mudstone, light olive-gray to brownish-gray.

Unit 133: Sandstone, 125 microns.

Unit 132: Sandstone, 125-135 microns. 2 in. of scour, and contains 20-25 percent small clasts of fine-grained limestone.

Unit 131: Mudstone. Grayish-olive, contains one thin bed of lenticular 125 micron sandstone.

Unit 130: Sandstone, 75 microns. Contains a few mudstone beds.

Unit 129: Limestone. Base sharp, 2.8-3.1 in. of basal 5.9 in. is sandy ostracodal and ooid grainstone; 5.9-17.7 in. is light-gray silty micrite truncated by troughs or channels filled with ostracodal grainstone; 17.7 in. to top is silty micrite containing lenses of fish scales near base.

Unit 128: Mudstone. Green, silty, minor ostracodes.

Unit 127: Sandstone, 100-115 microns. 4.7-9.1 in. above base contains 30 percent ooids and ostracodes; wavy planar laminations in lower 9.1 in.; upper 6.7 in. structureless.

Unit 126: Sandstone, coarsens upward slightly (80 to 95 microns). Sedimentary structures obscured by weathering, small orange concretions near top.

Unit 125: Mudstone. Pale-olive.

Unit 123: Sandstone, 90 microns.

Unit 122: Sandstone, 65-70 microns.

Unit 121: Sandstone, coarsens upward (70 to 130 microns).

Unit 120: Interbedded 65-130 micron sandstone (65 percent) and mudstone (35 percent). Sandstone beds are 0.8-9.8-inch-thick, some beds are structureless, some contain ripples and wavy planar laminations, one bed contains ball-and-pillow structure; mudstone is olive-gray.

Unit 119: Mudstone. Light olive-gray, laminated in places, abundant fractures filled with gypsum.

Unit 118: Limestone. Algally laminated, mainly pillar-type stromatolites, some horizontal laminations, top of bed has irregular mounds.

Unit 117: Limestone. Micrite (?), laminated, white; upper half contains small lenses of ooids, proportion of ooids increases upward.

Unit 116: Limestone. Micrite (?), very light-gray, weathers yellow to orange, silty.

Unit 115: Limestone. Composed of well-rounded limestone intraclasts (sand sized to 0.02 in. diameter), clasts fine upward.

Unit 114: Mudstone. Green; one 2-inch-thick bed of limestone composed of well-rounded limestone intraclasts (similar to unit 115).

Unit 113: Sandstone, 80-175 microns. 11.8 in. of scour; basal 21.7 in. coarsens upward (80-100 microns) and has 3.9 in. of ripples overlain by wavy planar laminations; 21.7 in. to top fines upward (175-130 microns), sharp contact with underlying finer sandstone, abundant ooids and algally laminated limestone in lower 3.1 in. of upper part.

Unit 112: Mudstone and siltstone. Unit consists of green mudstone overlain by greenish siltstone.

Unit 111: Siltstone and limestone. Basal 5.9 in. is calcareous siltstone (?); upper 13.8 in. is limestone composed of ooids and small well-rounded limestone clasts.

Unit 110: Interbedded sandstone (60 percent) and mudstone (40 percent). Mudstone is green and is present as three 7.9-11.8-inch-thick beds; two lowest sandstone beds are about 11.8 in. thick and contain ripples, upper sandstone beds are finer (70-80 microns), thinner, and structureless.

Unit 109: Interbedded mudstone (60 percent), sandstone-siltstone (30 percent), and limestone (10 percent). Mudstone is green, one bed near base contains purple mottles, contacts with mudstone beds sharp to gradational; limestone is one 7.9-inch-thick bed of ooid grainstone; sandstone-siltstone beds are 3.9-9.8-inch-thick, grain size medium-grained silt to very fine grained sand.

Unit 108: Limestone. Basal 3.9 in. contains abundant ostracodes, coated ostracodes, and limestone clasts; 3.9-13.8 in. is ooid grainstone; 13.8-23.6 in. is algal laminated (subhorizontal); 23.6-29.5 in. consists of grain-supported small limestone clasts ; 29.5 in. top is transitional to green mudstone.

Unit 107: Limestone (?). Contains ooids (?). Light-gray, weathers yellow.

Unit 106: Mudstone, green.

Unit 105: Sandstone, fines upward (160-125 microns). Base truncates unit 104 in places; top 3.9 in. grades into green mudstone.

Unit 104: Mudstone. Green, with intervals of abundant 150-175 micron sand.

Unit 103: Sandstone, 150 microns. Scours as much as 23.6 in. of unit 102.

Unit 102: Interbedded mudstone (70 percent) and sandstone-siltstone (30 percent). Most sandstone-siltstone beds are less than 5.9 in. thick; mudstone is green.

Unit 101: Interbedded 80-125 micron sandstone (80 percent) and mudstone (20 percent). Mudstone is green and thin bedded; sandstone beds are up to 11.8 in. thick; contains well expose wave ripples and wavy planar laminations.

Unit 100: Limestone. Composed of ostracodes, limestone intraclasts, and 10-20 percent sand (100-150 microns). Near base is in-place and ripped-up algal laminated limestone; top 3.9 in. is algal laminated limestone (subhorzontal and tube type).

Unit 99: Sandstone, 200-220 microns. 0.4-3.9-inch-basal interval of bone fragments, fish teeth, and limestone clasts; several vertical to oblique burrows filled with limestone.

Unit 98: Limestone. Micrite (?), light-to-medium-gray, fine-grained, one algal laminated zone, weathers yellow to orange-yellow.

Unit 97: Mudstone. Green, laminated in places, 4.7-inch-thick zone in center is medium-gray and calcareous.

Unit 96: Sandstone, 165-180 microns. Basal 13.8 in. contains 5-10 percent ostracodes and is structureless; upper 13.8 in. is wave rippled; contains green mudstone flasers and a few vertical burrows; top 3.9 in. contains abundant yellow ostracodes and limestone clasts and thin laminae of finer grained rock.

Unit 95: Limestone (?). Silty micrite (?), base gradational, laminated, carbonaceous debris along some bedding planes.

Unit 94: Limestone (?). Light to medium brownish-gray, very calcareous, fine-grained, laminated in places; a thin interval containg carbonaceous debris along bedding plane is near base.

Unit 93: Limestone: Basal 9.8 in. is mainly ooid grainstone; 9.8-13.8 in. is light-green siltstone; 13.8-14.6 in. is ostracodal grainstone containing small carbonate clasts, erosively truncates underlying siltstone; 14.6-23.2 in. is laminated ooid limestone containing minor ostracodes and limestone clasts; 23.2-24.4 in. is medium-gray micrite; 24.4 in. to top is light-gray to light-brown silty micrite.

Unit 92: Interbedded mudstone (50 percent) and sandstone-siltstone (50 percent). Bed thickness 7.9-23.6 in.; mudstone pale-green; sedimentary structures poorly exposed, ripples in places.

Unit 91: Interbedded mudstone (70 percent) and sandstone-siltstone (30 percent). Mudstone is light olive-gray and laminated (?).

Unit 90: Interbedded siltstone and mudstone. Contacts indistinct, siltstone contains sparse ostracodes.

Unit 89: Limestone. Most consists of micrite that contains ooids, ostracodes, fragments of laminated limestone (sand sized to 3.9 in. in diameter), and a few bone fragments; 10-20 percent laminated limestone (horizontal laminations, small asymmetric domes, and oncolites(?)).

Unit 88: Mudstone. Green, three thin siltstone beds.

Unit 87: Interbedded sandstone-siltstone (80 percent) and mudstone (20 percent). Sandstone-siltstone consists of coarse-grained siltstone to 125 micron sandstone, some sandstone beds fine up (125 to 80 microns).

Unit 86: Mudstone and siltstone. Mainly laminated mottled green, brown and reddish-purple mudstone, minor siltstone, mudstone fills irregularities in top of unit 85.

Unit 85: Limestone. Algal laminated, basal 15.7 in. consists of large domal stromatolites; ostracodes, oncolites, and tube-type stromatolites are present between the domes; upper 23.6 in. consists of tube-type stromatolites, tubes concentrically laminated.

Unit 84: Limestone. Micrite (?), very light-gray, very fine.

Unit 83: Limestone. Ostracodal grainstone; 1.2-inch-thick zone of small intraclasts 23.6 in. above base.

Unit 82: Interbedded and interlaminated limestone, siltstone, sandstone, and mudstone. Basal 7.9 in. is light-greenish-gray siltstone ; 7.9-45.3 in. is interlaminated to thinly interbedded siltstone, sandstone, and ostracodal and ooid grainstone; 45.3 in. to top is poorly exposed mudstone.

Unit 81: Interbedded green mudstone (40 percent) and very fine grained sandstone-siltstone (60 percent).

Unit 80: Sandstone, 70-95 microns. One thin bed of green mudstone near center.

Unit 79: Mudstone. Light-olive, middle 13.8 in. is mottled light olive-gray and purple.

Unit 78: Siltstone and mudstone.

Unit 77: Sandstone, 62-130 microns.

Unit 76: Mudstone. Green.

Unit 75: Limestone. Composed of ostracodes and 15-20 percent carbonate intraclasts (as long as 1.2 in.) composed of very fine grained, partly laminated limestone, clasts are mainly 7.9-23.6 in. above base, few bone fragments.

Unit 74: Interbedded mudstone, siltstone, and sandstone. Contacts between rock types is gradational, bed thickness 2.8-11.8 inches.

Unit 73: Sandstone, coarsens upward slightly (90 to 110 microns). 2-2.8 in. of basal lag with fish scales and small noncalcareous clasts; top 2-3.9 in. grades upwards to greenish-gray mudstone.

Unit 72: Mudstone. Greenish-gray, moderately silty, moderately calcareous, siltier at top.

Unit 71: Sandstone, two fining-upward sequences (145-85 microns and 125-70 microns). Most of unit is structureless.

Unit 70: Mudstone, greenish-gray.

Unit 69: Limestone. Ostracodal grainstone, yellow.

Unit 68: Sandstone, 70-105 microns. Sparse ostracodes and ostracodal limestone clasts near top.

Unit 67: Sandstone, 70 microns.

Unit 66: Interbedded sandstone (70-110 microns) and mudstone. Consists of several structureless sandstone beds separated by 2-3.1-inch-thick beds of greenish-gray mudstone.

Unit 65: Limestone and sandstone (65-125 microns).

Unit 64: Mudstone, limestone, and siltstone. Basal medium-brownish gray, calcareous mudstone grades upward to intraclast limestone that grades upward to a bed of mudstone containing a 3.9-inch-thick siltstone bed.

Unit 63: Mudstone and limestone. Mainly very pale-orange, calcareous mudstone; basal 3.1 in. is limestone consisting of small calcareous plates and round carbonate grains.

Unit 62: Siltstone, medium-grained. Medium-gray, laminated, fine-grained carbonaceous debris.

Unit 61: Limestone. Ostracodal grainstone, few bone fragments.

Unit 60: Siltstone.

Unit 59: Mudstone and siltstone, laminated.

Unit 58: Limestone. Ostracodal grainstone.

Unit 57: Siltstone. Plant debris on bedding planes.

Unit 56: Mudstone. Light olive-gray, moderately calcareous, slightly silty.

Unit 55: Interbedded sandstone, siltstone, mudstone, and limestone. Basal 3.9 in. and top 3.5-5.1 in. is limestone; middle of unit is thinly interbedded mudstone, siltstone, and sandstone.

Unit 54: Interbedded sandstone, mudstone, and siltstone. Bed thickness 1.6-3.1 in., beds have sharp tops and bases; sandstone contains as much as 20 percent ostracodes.

Unit 53: Interbedded limestone mudstone and siltstone. Basal 13.8 in. is interbedded siltstone and mudstone, contains ostracodes; 13.8-29.5 in. above base is limestone containing ostracodes; top 13.8 in. is greenish-gray mudstone, faintly to moderately laminated, slightly calcareous, slightly silty.

Unit 52: Dolostone. Laminated (laminations somewhat wavy and disturbed), olive-gray.

Unit 51: Mudstone and siltstone. Very pale-orange, slightly calcareous siltstone grades upward to light-greenish-gray, moderately calcareous, siltier mudstone that grades upward to yellowish-orange, very calcareous, silty mudstone or siltstone.

Unit 50: Sandstone (62-130 microns) and siltstone (very coarse grained). Slightly to very calcareous.

Unit 49: Siltstone to very coarse grained mudstone. Very silty, structureless, slightly calcareous, tiny irregular tubes (rootlets?).

Unit 48: Sandstone, 70-120 microns. Upper 9.2 feet sedimentary structures obscured by desert varnish.

Unit 47: Siltstone-sandstone and mudstone. Unit consists of very coarse grained siltstone and very fine grained sandstone containing greenish-gray mudstone flasers and several thin greenish-gray mudstone beds.

Unit 46: Siltstone, very coarse grained.

Unit 45: Sandstone, 110 microns.

Unit 44: Covered.

Unit 43: Sandstone, 60-150 microns. Basal 5.2 feet is 60-70 microns; 5.2 feet to top is 125-150 microns with scoured base.

Unit 42: Mudstone, greenish-gray.

Unit 41: Covered along measured section. Few feet north this interval is continuation of unit 40F (very fine grained rippled sandstone).

Unit 40: Sandstone and siltstone. Unit scours interval of interbedded sandstone and red and green mudstone. Divided into six subunits: (A) coarsens upward from red to green mudstone to siltstone to very fine grained sandstone; (B) 130-140 micron sandstone; (C) mainly medium-to coarse-grained laminated siltstone; (D) 130-140 micron sandstone with mica along bedding planes; (E) ostracode rich sandstone 130-180 microns; (F) 110 micron sandstone.

Unit 39: Mudstone, red.

Unit 38: Sandstone, 85-160 microns. Upper third of unit fines upward from 100 to 85 microns; lower half of unit has several scour surfaces with intraclasts; above base are several lenticular zones of sandstone, siltstone, and mudstone clasts (1.6 in. or less); upper 24.9 feet sedimentary structures are poorly exposed; lateral-accreation bedding dips to northeast.

Unit 37: Interbedded limestone, siltstone, mudstone and sandstone. Basal 2 in. is dark-brown, carbonaceous, calcareous siltstone; 2-3.1 in. above base is limestone containing coated ostracodes; 3.1-4.7 in. is very fine grained sandstone; 4.7-9.8 in. above base is calcareous siltstone or mudstone; 9.8-11.0 in. is limestone containing small shell fragments; 11.0-15.4 in. is limestone; 15.4-22.4 in. is laminated dolostone; 22.4 in. to top is mudstone.

Unit 36: Mudstone. Greenish-gray, 2-10 percent ostracodes.

Unit 35: Interbedded mudstone and siltstone (coarse grained). Siltstone is light-gray and calcareous; mudstone is very silty, and is present as two beds (3.9-5.9 in.) in the siltstone.

Unit 34: Interbedded siltstone and mudstone. Basal 29.5 in. is siltstone; 29.5-49.2 in. is red mudstone contains small mudstone clasts and one thin siltstone bed; 49.2-59.1 in. is light-greenish-gray siltstone; 59.1 in. to top is reddish-purple and purple mudstone.

Unit 33: Mudstone. Colors (base to top): greenish gray, red with light-green interbeds and mottling, grayish-red, purple with green mottles; contacts between different colors irregular and gradational.

Unit 32: Sandstone, 65-70 microns. Base is sharp and has 11.8 in. of scour. Top grades into overlying mudstone.

Unit 31: Mudstone. Greenish-gray overlain by red.

Unit 30: Sandstone, fines upward (95 to 65 microns). Base has 3.9 in. of scour.

Unit 29: Limestone. Light-gray, hard, contains mud- to grain-supported ostracodes.

Unit 28: Interbedded sandstone-siltstone (50 percent), red mudstone (30 percent), and greenish-gray mudstone (20 percent). Basal 10.8 feet is mainly green mudstone; 10.8-28.5 feet is red mudstone containing green mottles, and subordinate green mudstone containing abundant rippled sandstone and siltstone; top 11.8 in. is sandstone.

Unit 27: Sandstone, 70-115 microns.

Unit 26: Mudstone. Basal 9.8 in. red; top 2 in. green.

Unit 25: Sandstone, 70-80 microns.

Unit 24: Mudstone. Consists of 0.4-inch-thick bed of greenish-gray mudstone overlain by 3.5-inch-thick bed of red mudstone.

Unit 23: Sandstone, 70-80 microns.

Unit 22: Mudstone. Red and lesser green, mottles of greenish-gray mudstone in the red mudstone.

Unit 21: Siltstone (very coarse grained) and sandstone (100 microns). Sedimentary structures obscured by weathering.

Unit 20: Mudstone, greenish-gray.

Unit 19: Siltstone and sandstone. Top 3.9 in. of unit is very fine grained sandstone containing 10 percent ostracodes, in places top 3.9 in. of unit is ostracode and ooid grainstone containing some bone fragments, fish scales and teeth.

Unit 18: Siltstone. Very coarse-grained. Light gray.

Unit 17: Mudstone and siltstone. Greenish-gray mudstone grades upward to coarse-grained siltstone.

Unit 16: Mudstone, greenish-gray, concretions in places.

Unit 15: Limestone. Consists of grain-supported ostracodes and ooids(?) and 40 percent sand.

Unit 14: Mudstone, greenish-gray.

Unit 13: Sandstone,70-80 microns. Contains ostracodes and ooids that are disseminated, occur in discrete laminae, upward increase in proportion of ostracodes and ooids; top few inches of unit is silty ostracodes and ooid grainstone, most of unit obscured by desert varnish.

Unit 12: Mudstone, greenish-gray.

Unit 11: Sandstone, 70-115 microns. Unit consists of 4.7-inch-thick bed of 70 micron sandstone overlain by a 11.0-inch-thick bed of 115 microns sandstone.

Unit 10: Interbedded mudstone and siltstone. Basal 19.7 in. is interbedded red and greenish-gray mudstone and siltstone; top 3.6 feet is grayish-red and subordinate greenish-gray mudstone, both mottled.

Unit 9: Interbedded siltstone and mudstone. Mainly light-greenish coarse-grained siltstone containing light-colored mudstone interbeds.

Unit 8: Sandstone, 65-80 microns. Greenish-gray mudstone near base in places.

Unit 7: Mudstone, greenish-gray.

Unit 6: Sandstone, 100-200 microns. Sandstone contains back-filled burrows, unit has lenticular geometry.

Unit 5: Interbedded mudstone and siltstone. Basal 7.9 in. is covered. Mudstone is greenish-gray, siltstone is very coarse grained.

Unit 4: Sandstone. Unit divided into two subunits: (1) basal 28.5 feet is 70 microns at base, 110-150 microns above base; (2) 28.5 feet to top, base of subunit is a scoured surface having 15.7-19.7 in. of relief and a basal lag of clasts of greenish-gray mudstone, siltstone and sandstone in matrix of 110-120 micron sandstone.

Unit 3: Interbedded limestone, mudstone, siltstone, and sandstone. Basal 9.8 in. is 225 micron sandstone, grades upward to siltstone, scours units 1 and 2 in places, contains lenticular 0.008-0.06 in. lenses of ostracodes, few feet to south entire unit contsists of ostracodal grainstone; 9.8-19.7 in. above base is green mudstone; 19.7-35.4 in. is 125 micron sandstone, half trough cross-beds, half structureless; 35.4 in. to top is green mudstone.

Unit 2: Mudstone. Red and green, basal tool marks oriented east-west.

Unit 1: Interbedded mudstone and sandstone (90 microns). Base of unit indistinct; mudstone green and red.

LEGEND

LITHOLOGY

- Sandstone
- Silty Sand
- Siltstone
- Mudstone
- Covered Slope
- Limestone
- Dolomite

CONTACTS

- Sharp

PHYSICAL STRUCTURES

- Trough Cross-Strat.
- Lenticular Bedding
- Mudcracks
- Flaser Bedding
- Wavy Planar Laminations
- Pillar-Type Algal Stromatolites
- Climbing Ripples
- Hummocky Cross-Strat.
- Double Mud Drapes
- Ripples
- Soft-Sediment Deformation
- Planar Lamination
- Scour
- Stylolites
- Wave Ripples
- Domal-Type Algal Stromatolites

LITHOLOGIC ACCESSORIES

- Shell Fragments
- Calcareous
- Mc - Micaceous
- Oolites
- Clasts

ICHNOFOSSILS

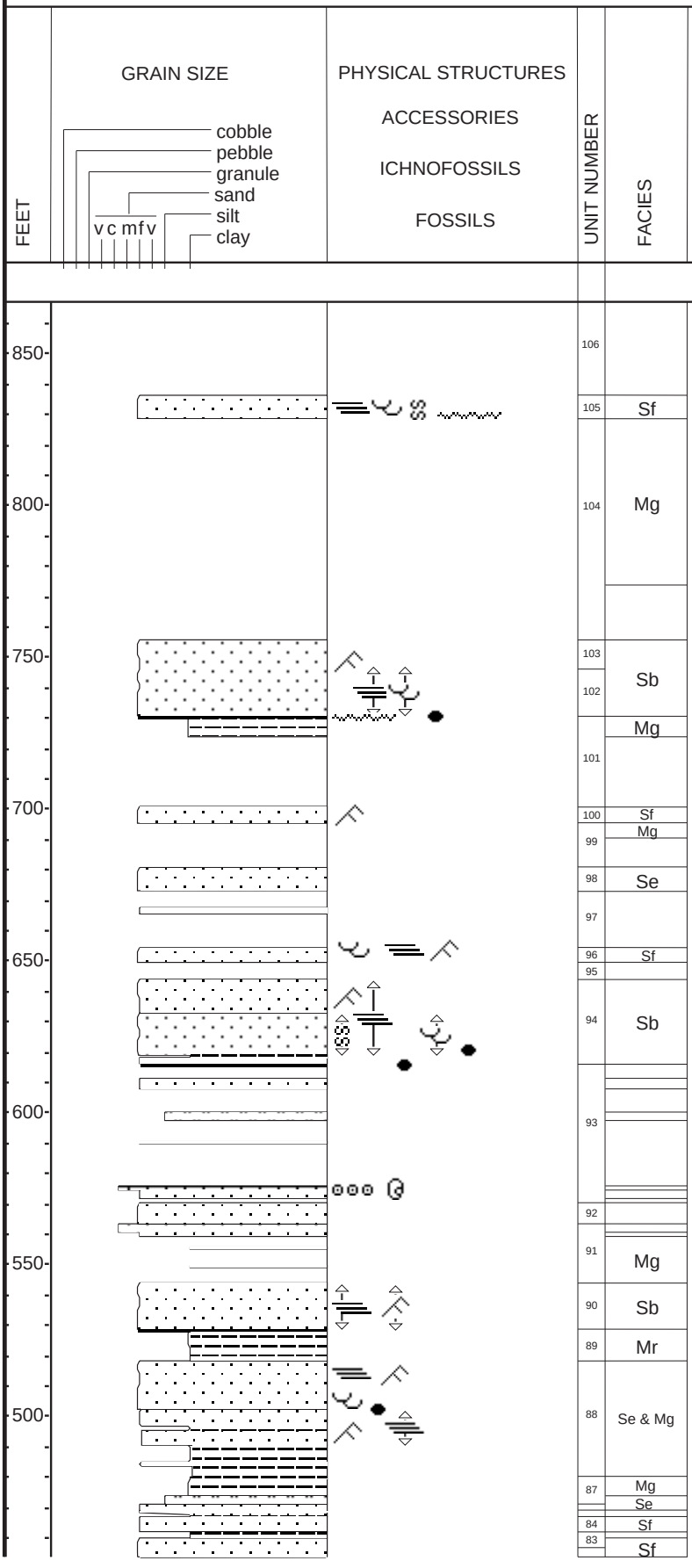
- Rootlets
- Horizontal Burrows
- Vertical Burrows

FOSSILS

- Fish Scales
- Carbonized Fossils (undifferentiated)
- Ostracodes
- Plant Remains

Remy 11

The section is located in Nine Mile Canyon and begins and ends in the SE1/4NW1/4 section15, T. 12 S., R. 13 E., of the Salt Lake Base line and Meridian, Duchesne County, Utah.



Unit 106: Covered. Top of unit 106 is top of ridge.

Unit 105: Sandstone, coarsens upward (110 to 140 microns). Base sharp and scoured, sandstone contains trough crossbeds and planar laminations that are, in places, disrupted by soft-sediment deformation.

Unit 104: Covered. Green mudstone fragments in upper 55.8 feet; green mudstone crops out beneath unit 105.

Unit 103: Sandstone, 105 microns. Poorly exposed, rippled (50 percent) and structureless (50 percent).

Unit 102: Sandstone, 105 microns. Base sharp, several feet of scour; base of unit is composed of several lenticular sandstones; basal 29.5 inches has several zones of generally well rounded siltstone and mudstone clasts as long as 3.1 inches; trough crossbeds and planar laminations that dip (due to lateral-accretion bedding) are throughout unit; upper 6 feet contains abundant ripples; abundant scour and fill within unit; mudstone interbeds in lower half only.

Unit 101: Mainly covered. Silty light-gray mudstone 6 feet thick crops out beneath unit 102.

Unit 100: Sandstone, 80-110 microns. Base sharp, scoured, dips northeast; most of unit is structureless, ripples in basal 15.7 inches.

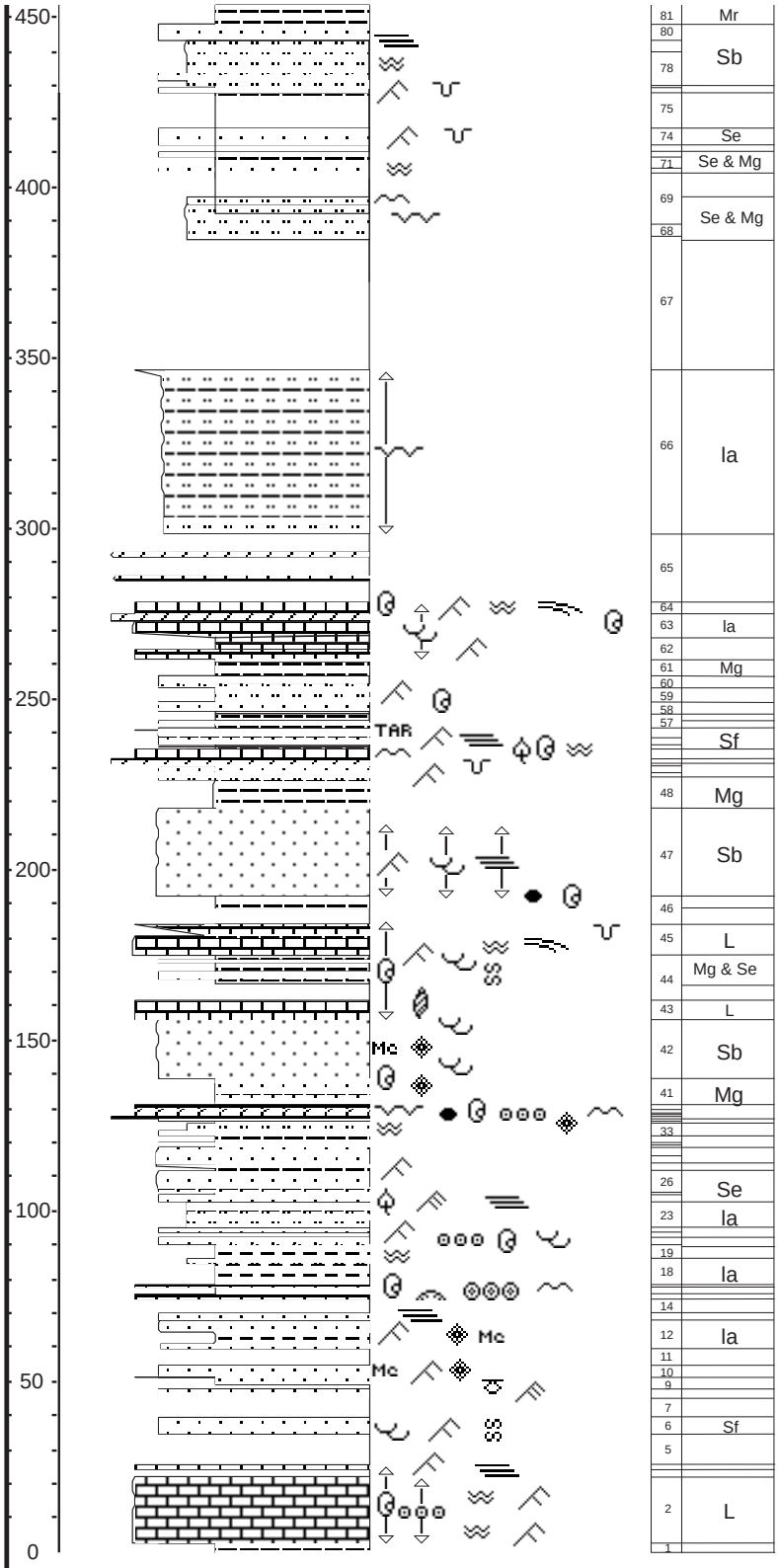
Unit 99: Mainly covered. Lower 5.2 feet is covered by thick soil; upper 9.2 feet has abundant fragments of green mudstone on surface.

Unit 98: Sandstone, 56-80 microns. Base is covered, structureless.

Unit 97: Mainly covered. Unit has one poorly exposed 90 micron sandstone bed.

Unit 96: Sandstone, 125 microns. Base and top of unit dip 15° northewest (i.e. lateral-accretion bedding); unit thins toward northwest.

Unit 95: Mainly covered. Friable, very fine grained sandstone crops out beneath unit 96.



Unit 94: Sandstone, 100-140 micron. 19.7-23.6 inches of scour (truncates siltstone and mudstone); basal 19.7-23.6 inches is 140 micron sandstone containing mudstone clasts; 23.6-31.5 inches above base is mudstone; 2.6-16.7 feet is sandstone which has basal siltstone clasts as long as 3.9 inches; 16.7 feet to top. Beds of unit are hoizontal along measured section but 164-246 feet west same unit contains lateral-accretion beds that dip to northeast(sandstone beds are 6-9 feet thick and thin downdip, mudstone interbeds thicken downdip).

Unit 93: Covered (65 percent), minor sandstone, siltstone, and limestone.

Unit 92: Sandstone, coarsens upward (70 to 115 microns). Base sharp and flat, bed thickness 19.7-23.6 inches, small sand filled channel cuts top of unit, structureless.

Unit 91: Mainly covered. Several outcrops of green mudstone; 19.7-inch-thick be of 70 micron sandstone; toward west unit is all sandstone.

Unit 90: Sandstone, 100-125 microns. Base is sharp and scoured; 80 percent structureless, 10 percent planar laminated, and 10 percent rippled; lenticular geometry, sandstone beds within unit dip 20°north 5°east (lateral accretion bedding).

Unit 89: Mudstone. Red, mainly covered.

Unit 88: Sandstone and mudstone. Complex sandstone body composed of three subunits: (1) Basal 9.8 feet is interbedded red and green mudstone (80 percent) and very fine grained sandstone (20 percent), bed thickness less than 9.8 inches, sandstones have sharp bases and tops, base of subunit flat; (2) 9.8 to 22 feet above base is interbedded sandstone (80 percent) and mudstone (20 percent), beds dip 35 degrees northeast (lateral accretion bedding), sandstone beds merge updip and truncate mudstones, sandstone are 80-110 microns, 50 percent structureless, 30 percent rippled, 20 percent planar laminations; (3) 22 feet to top is sandstone, fines upward (140 to 100 microns), mudstone clasts at base.

Unit 87: Siltstone and mudstone. Basal 2.3 feet is silstone; upper 6.6 feet is red mudstone overlain by 11.8-inch-thick bed of green mudstone.

Unit 86: Sandstone, 100 micron. Structureless.

Unit 85: Mudstone. Green, poorly exposed.

Unit 84: Sandstone, coarsens upward (65 to 90 microns).

Unit 83: Sandstone (67-70 microns). and green mudstone. Poorly exposed; lower half sandstone; upper half green mudstone.

Unit 82: Sandstone, coarsens upward (65 to 100 microns). Structureless.

Unit 81: Mudstone. Poorly exposed; light to medium grayish purple in lower 3.9 feet; green in upper 2 feet.

Unit 80: Sandstone, 65-70 microns. Structureless except for laminations at base, breaks into thin slabs.

Unit 79: Siltstone. Medium brownish gray, slightly calcareous, poorly exposed.

Unit 78: Siltstone and sandstone (80 microns). Basal 3.3 feet grades from siltstone to sandstone; upper 7.2 feet is siltstone, breaks into curving plates.

Unit 77: Mudstone. Green.

Unit 76: Sandstone. Base gradational from green mudstone through siltstone to 70-80 micron sandstone; 60 percent of unit is structureless, 40 percent ripples; vertical burrows, laterally persistent.

Unit 75: Covered. Green mudstone 7.9 inches thick at top.

Unit 74: Sandstone, fines upward (105 to 65 microns). Base gradational from very coarse grained siltstone to sandstone; 85-90 percent of unit structureless, 10-15 percent rippled; upper third of unit contains small concretions or burrows.

Unit 73: Covered. Green mudstone under soil.

Unit 72: Sandstone, 65-70 microns. Structureless, moderately calcareous.

Unit 71: Mudstone. Green, silty, poorly exposed.

Unit 70: Sandstone and siltstone. Base transitional from silty mudstone to siltstone to 95 micron sandstone; top of unit grades into siltstone that breaks to wavy plates.

Unit 69: Siltstone and mudstone, 50 percent covered. Base is medium-grained calcareous brownish-gray siltstone, large mudcracks; 6.6-8.5 feet is calcareous medium-gray siltstone, breaks into thin plates, some of which exhibit symmetrical undulations (wave ripples?); 8.5-14.8 feet is covered; 14.8 feet to top is silty greenish-gray mudstone.

Unit 68: Siltstone, very coarse grained. Calcareous, forms resistant ledge.

Unit 67: Mainly covered. Top of unit is 7.9-inch-thick bed of coarse grained siltstone.

Note: At contact between units 66 and 67 there is a regional change in the weathered color of the rocks from light gray below to brown above.

Unit 66: Mudstone-siltstone. Moderately fissile, slightly to moderately calcareous silty mudstone-siltstone, variable colors; basal 10.2 ft is medium brown; 10.2-13.4 feet is light medium gray; 13.4-42.6 feet is medium brownish gray; 42.6 feet to top is light gray; mudcracks in places; 5.9-inch-thick bed of 135 micron sandstone 4.9 feet above base.

Unit 65: Dolostone. Poorly exposed, laminated, medium to dark brown, weathers into paper shale.

Unit 64: Limestone. Ostracodal grainstone, most structureless, minor ripples and trough crossbeds in places, unit breaks into thin wavy slabs suggesting wavy planar laminations or HCS.

Unit 63: Dolostone and limestone. Basal 2 inches of unit is white limestone interbedded with ostracode grainstone; most of unit is laminated and kerogenous (oil shale), calcareous, medium brown, some ostracodes.

Unit 62: Limestone. Ostracodal grainstone, bed thickness 3.9-15.7 inches, few thin greenish-gray mudstone and brown fissile shale interbeds; 70-80 percent structureless; 20-30 percent has trough crossbeds and ripples; one bed in center of unit contains coated ostracodes in top 2-3.9 inches.

Unit 61: Mudstone and siltstone. Greenish-gray to light-gray mudstone containing beds of light-gray medium-grained siltstone; upper 11.8 inches is all greenish gray mudstone.

Unit 60: Sandstone, 70-80 microns. Base sharp, rippled, few thin green mudstone interbeds near base.

Unit 59: Mudstone and siltstone. Mudstone-siltstone contacts are gradational.

Unit 58: Sandstone. Basal 25.6 inches grades upward from mudstone through siltstone to very fine grained sandstone; upper 17.7 inches fines upward (130 to100 micron), 0-10 percent ostracodes.

Unit 57: Mudstone, green.

Unit 56: Mudstone, siltstone, and sandstone. Grades upward from green mudstone through siltstone to 70-80 micron sandstone.

Unit 55: Sandstone, 80-100 microns, coarsens upward. Basal 25.6 inches contains planar laminations and ostracode limestone laminae (20 percent of interval); upper 3.1 feet contains a few ostracode limestone laminae and is rippled and tar saturated in places.

Unit 54: Interbedded siltstone, mudstone, and sandstone. Basal 1.2 inches is laminated siltstone; 1.2-4.3 inches is light-to-medium-gray calcareous mudstone; 4.3-5.9 inches is 65 microns sandstone; 5.9 inches to top is live gray to greenish gray mudstone.

Unit 53: Limestone. Basal 11.8 inches is ostracode grainstone that contains wavy planar laminations and few thin interbeds of grayish-brown, fissile dolostone, limestone bed thickness less than 3.9 inches, some beds have symmetrical undulatory bases; middle 11.8 inches is ostracode grainstone; top 7.9 inches consists of well-rounded carbonate grains, minor ostracodes.

Unit 52: Dolostone. Laminated and kerogenous (oil shale), grayish brown (5YR 3/2).

Unit 51: Sandstone, 65-70 microns.

Unit 50: Mudstone and sandstone. Poorly exposed green mudstone containing one 3.9-inch-thick bed of very fine grained sandstone in center.

Unit 49: Sandstone, 65-70 microns. Basal 5.9 inches sturctureless; upper 9.8 inches rippled, few vertical burrows.

Unit 48: Mudstone and siltstone. Mudstone dusky yellow green, poorly exposed; 7.9-inch-thick bed of very coarse grained siltstone crops out beneath unit 49.

Unit 47: Sandstone, fines upward (160-90 microns). Basal 3.9 inches consists of matrix of 160 micron sand and angular mudsonte clasts as long as 3.9 inches, hematite-stained plant debris, muscovite, small yellow limestone fragments, and ostracodes; top 15.7 inches contains laminations that dip as much as 20^{O} toward 310^{O} (lateral accretion bedding?); unit is laterally persistent for at least 246 feet but appears to thicken and thin.

Unit 46: Interbedded green mudstone (65 percent) and sandstone-siltstone (35 percent). Lower half covered; sandstone is very fine grained; sandstone and siltstone beds have sharp bases and tops and are less than 3.9 inches thick; mudstone is moderatley to very silty and calcareous.

Unit 45: Limestone. Ostracode grainstone; basal 3.3 feet contains wavy planar laminations that have low-angle truncations, trough crossbeds, and minor ripples; upper 6.9 feet is mainly structureless and contains few ripple foresets or wavy surfaces, burrows, and thin mudstone interbeds.

Unit 44: Mudstone and sandstone. Basal third covered; upper two-thirds green mudstone containing one 7.9-inch-thick bed of rippled very fine grained sandstone and one 23.6-inch-thick bed of 175 micron trough crossbedded sandstone containing ostracodes in places and some soft-sediment deformation.

Unit 43: Limestone. Ostracode grainstone, relatively abundant gastropods.

Unit 42: Sandstone, fines upward (175 to 135 microns) Base sharp and flat except one zone with 11.8-15.7 inches of scour; base contains 15-20 percent ostracodes; top 6.6 feet possible trough cross beds.

Unit 41: Interbedded mudstone (60 percent) and sandstone(40 percent). Basal 19.7 inches and upper 15.7 inches are mainly green mudstone; middle is interbedded green mudstone and very fine grained sandstone containing abundant fine-grained carbonaceous debris along some bedding planes, bed thickeness 3.9-5.9 inches.

Unit 40: Limestone. Ostracodal grainstone.

Unit 39: Dolostone and limestone. Brown, kerogenous, laminated dolostone (oil shale) with very large mudcracks filled with ostracodal grainstone.

Unit 38: Limestone. Clast-supported mix of ooids, ostracodes, and 0.004-0.6 inches long micrite intraclasts.

Unit 37: Limestone. Several beds of ostracode grainstone.

Unit 36: Dolostone. Medium brownish gray, structureless, very fine grained, weathers light green, abundant mudcracks filled with ostracodes.

Unit 35: Sandstone, 110 microns. Lower few inches contains carbonaceous debris in places; thickens and thins.

Unit 34: Mudstone. Greenish gray, top conains carbonaceous debris.

Unit 33: Sandstone and siltstone. Lower half coarsens upward from 65 to 85 micron sandstone; upper half is fine to very coarse grained siltstone, lower 25.6 inches contains wavy planar laminations and wave ripples.

Unit 32: Mudstone. Greenish gray, similar to unit 30.

Unit 31: Sandstone, 125 microns.

Unit 30: Mudstone. Greenish gray, moderately silty, moderately calcareous, typical mudstone weathering.

Unit 29: Sandstone, fines upward (150-125 microns). Unit thickens to west, contains scattered small hematite concretions.

Unit 28: Sandstone, less than 90 microns.

Unit 27: Shale. Medium gray, slope forming, slightly silty, slightly calcareous.

Unit 26: Sandstone, variable grain size (70-140 microns).

Unit 25: Mudstone. Light olive gray, carbonized plant impressions and few very thin coal seams.

Unit 24: Sandstone, 100 microns. Basal 3.9 inches contains planar laminations and plant debris; upper 19.7 inches current ripples; few hematite concretions in upper 7.9 inches.

Unit 23: Shale and siltstone. Dark-gray, slightly calcareous shale, forms slope; upper 5.9 inches of unit is siltstone.

Unit 22: Sandstone, 70-80 microns. Truncates unit 21 and most of unit 20 northwest of measured section; unit 22 appears to dip to northwest (lateral accretion bedding).

Unit 21: Covered.

Unit 20: Sandstone, 70-150 microns. Basal 7.9 inches is one bed of 70 micron sandstone containing wavy planar laminations; upper 11.8 inches is 150-125 micron sandstone that fines upward, contains 15-20 percent ostracodes and ooids, scours 3.9 inches into underlying sandstone bed.

Unit 19: Shale and siltstone. Basal 3.3 feet is poorly exposed light-olive-gray, slightly calcareous shale; upper 15.7 inches is light-gray, medium-to-coarse-grained siltstone.

Unit 18: Shale and siltstone. Light-to medium-brownish-gray shale containing siltstone, coarsens upward; top 19.7 inches is thin bedded gray siltstone that contains wavy planar laminations.

Unit 17: Limestone. Yellow silty micrite, sparse to abundant ostracodes and ooids; upper 2 inches is wave rippled sandy ostracode and ooid grainstone.

Unit 16: Shale. Medium greenish gray, breaks into slabs a few millimeters thick.

Unit 15: Limestone. Basal 11.8 inches is medium-brownish-yellow limestone, contains some algal laminations; top 3.9 inches consists of small domal stromatolites.

Unit 14: Covered.

Unit 13: Sandstone, 80-135 microns. Indistinct planar laminations and ripples, organic matter in center of unit.

Unit 12: Interbedded shale and sandstone. Partly exposed unit consists of interbedded dark-gray, silty, fissile shale and rippled 90 micron sandstone; several sandstone beds contain hematite concretions.

Unit 11: Covered.

Unit 10: Sandstone, 75-110 microns. Basal 13.8 inches is 75 micron sandstone; 13.8-29.5 inches is 110 micron sandstone, abundant mica and organic matter along ripple -bedding planes; 29.5 inches to top is 110 micron sandstone, minor amounts of mica and organic matter.

Unit 9: Mainly covered. Dark-gray, silty mudstone and thin-bedded 65 micron sandstone that has sole marks, crop out beneath unit 10.

Unit 8: Sandstone, 115-125 microns. Partly exposed, base dips 26° north and 60° east.

Unit 7: Covered.

Unit 6: Sandstone, coarsens upwards (95 to 120 microns).

Unit 5: Mainly covered. Dark-gray siltstone crops out beneath unit 6; 23-26 feet west of measured section interval consists of lenticular sandstone.

Unit 4: Limestone. Mainly medium-grayish-brown micrite containing a few ostracodes; top 3.9 inches of unit is ostracodal grainstone.

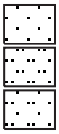
Unit 3: Covered.

Unit 2: Limestone. Composed of grain-supported ostracodes (80-90 percent) and ooids (10-20 percent); one bed contains minor chert nodules.

Unit 1: Mudstone, shale, ostracodal grainstone, and sandstone.

LEGEND

LITHOLOGY


Sandstone
Siltstone
Sandy Silt


Shale
Mudstone
Coal


Mudstone-Siltstone
Covered


Limestone
Dolostone

CONTACTS

Sharp

PHYSICAL STRUCTURES

- Trough Cross-Strat.
- Mud Cracks
- Ripples, Unknown
- Wavy Planar Laminations
- Stromatolite, Domal
- Planar Lamination
- Load Casts
- Wave Ripples
- Intraformational Conglomerate (IFC)
- Hummocky Cross-Strat.
- Soft Sediment Deformation
- Current Ripples
- Scour

LITHOLOGIC ACCESSORIES

Mc - Micaceous
- Oolitic
- Pisolites
TAR - Tar

ICHNOFOSSILS

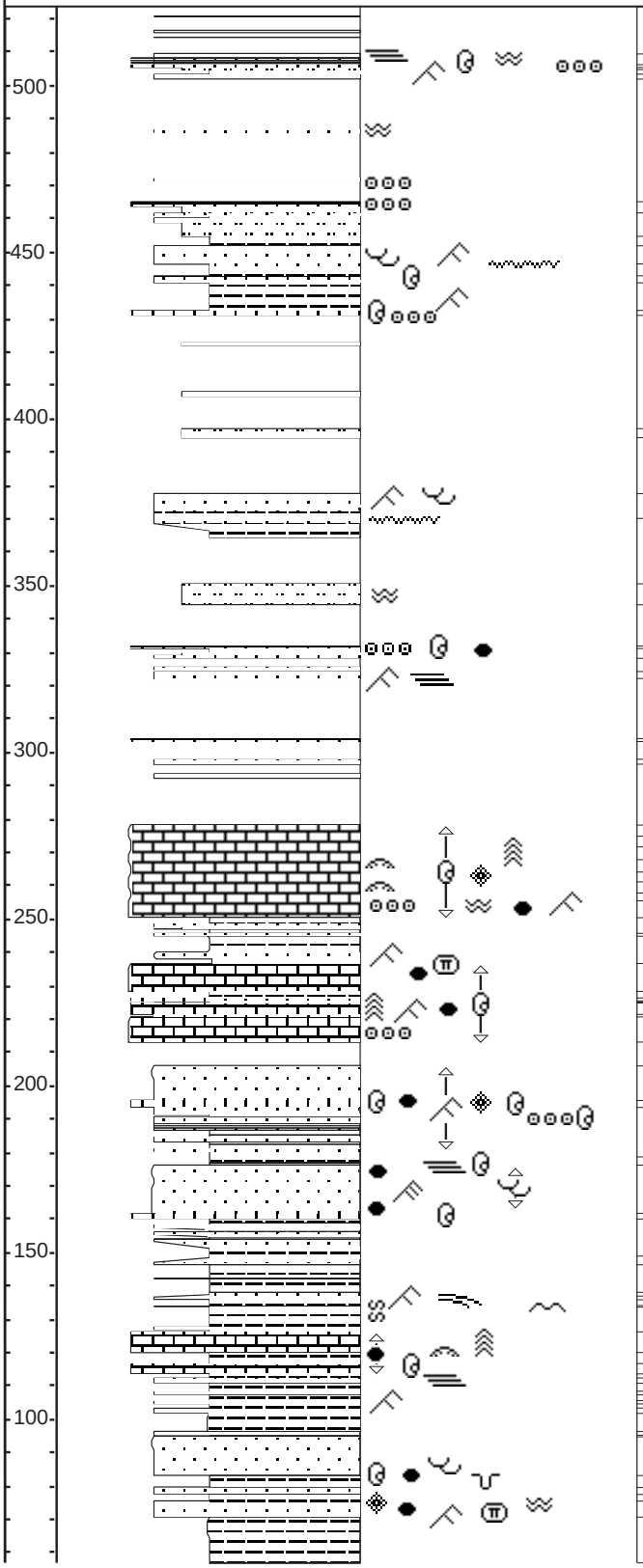
- Vertical Burrows

FOSSILS

- Carbonate Debris
- Plant Remains
- Gastropods
- Ostracodes

Remy 13

The section is located at the junction of Nine Mile and North Franks Canyons, beginning in the NW1/4NW1/4 section 1, T. 12 S., R.16 E. and ending in the SE1/4SE1/4 section 35, T. 11 S., R. 16 E., of the Salt Lake Base line and Meridian, Duchesne County, Utah.



Unit 103: Mainly covered. Unit has 4-5 thin (3.9-5.9 inches) beds of laterally persistent very fine-sandstone.

Unit 102: Sandstone, 65-70 microns. Planar laminations, some beds wavy, and minor ripples; few thin ostracodal limestone interbeds; several mudcracked zones; forms regionally prominent ledge.

Unit 101: Limestone. Basal 7.9 inches is algally laminated; upper 7.9 inches is grain-supported ooids without obvious nuclei.

Unit 100: Siltstone, medium grained. Very calcareous, white.

Unit 99: Mudstone. Green, poorly exposed.

Unit 98: Sandstone, coarsens upward slightly (90 to 110 microns). Rippled.

Unit 97: Mainly covered. Unit probably mainly green mudstone; 5.9 feet above base is 7.9-inch-thick bed of 135 micron sandstone containing ooids; 20.3 feet above base is laterally persistant 7.9-inch-thick bed of 75-80 micron sandstone that contains wavy planar laminations.

Unit 96: Sandstone, siltstone, and limestone. Basal 7.9 inches is sandstone, calcareous, contains ooids; 7.9-33.5 inches is siltstone, medium to coarse grained; 33.5 inches to top is limestone composed of ooids with sand nuclei, sand coarsens upward (90 to 120 microns).

Unit 95: Interbedded siltstone (50 percent), green mudstone (30 percent), and sandstone (20 percent). Siltstone is calcareous and thin bedded; sandstone is one 9.8-inch-thick bed 4.3 feet above base; top 11.8 inches is green mudstone.

Unit 94: Mudstone. Green.

Unit 93: Sandstone, 115-135 microns. Base sharp, 7.9-11.8 inches of scour; basal 3.3 feet contains trough crossbeds; upper 3 feet is 90 percent covered by desert varnish and 10 percent rippled.

Unit 92: Mudstone and siltstone. Basal 19.7 inches is green mudstone; upper 11.8 inches is silty green mudstone and siltstone.

Unit 91: Sandstone, 62-110 microns (coarsens up from mudstone). Base gradational and top sharp, top 5.1 inches is limestone containing ostracodes.

Unit 90: Interbedded green mudstone (60 percent) and sandstone (40 percent). Sandstone beds are rippled in places and are 0.8-5.9 inches thick.

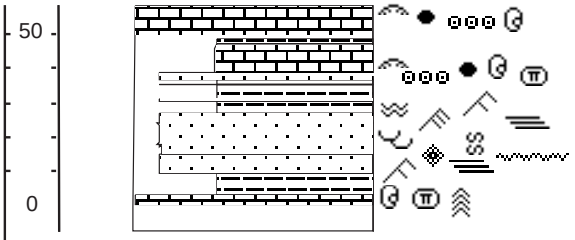
Unit 89: Limestone. Composed of ostracodes and ooids, and minor laminated algal limestone clasts.

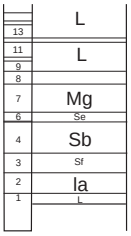
Unit 88: Covered. Greenish-gray mudstone fragments common, few thin siltstone beds.

Unit 87: Siltstone, medium-to coarse-grained (coarsens upward). Structureless.

Unit 86: Covered. Abundant greenish-gray mudstone fragments.

Unit 85: Sandstone, fines upward (150 to 105 microns). 7.9 inches of basal scour; basal 4.3 feet consists of seven 2.4-11.8-inch-thick beds separated by thin green mudstone beds; upper 3.6 feet is one bed containing ripples (15 percent) and trough crossbeds (5 percent), but most is obscured by weathering (80 percent).





Unit 84: Mainly covered. Upper 5.9 feet of unit is green mudstone that grades upward to 65 micron sandstone.

Unit 83: Interbedded siltstone (80 percent) and 80 micron sandstone (20 percent). Siltstone is laminated; sandstone contains wavy planar laminations, most sandstone is in zone 7.9-27.6 inches above base.

Unit 82: Covered.

Unit 81: Limestone (?). Ooid grainstone (?), contains abundant 135 micron sand with carbonate coating and carbonate intraclasts and ostracodes.

Unit 80: Mudstone, sandstone and siltstone.

Unit 79: Mainly covered. One 5.9-in-thick bed of 105 micron sandstone in lower third.

Unit 78: Sandstone, 110 microns. Partly exposed; basal 7.9 inches is planar laminated; upper 9.8 inches is rippled.

Unit 77: Covered.

Unit 76: Limestone. Ostracodal grainstone.

Unit 75: Covered.

Unit 74: Sandstone, coarsens upward slightly (80 to 110 microns). Structureless.

Unit 73: Mainly covered. One 7.9-inch-thick bed of ledge-forming sandstone 14.4 feet above base.

Unit 72: Limestone. Ostracode grainstone, very sandy in places, weathers into slabs.

Unit 71: Limestone. Ostracode grainstone.

Unit 70: Limestone. Pillar-type stromatolites, pillars 0.08-1.0 inches wide and as long as 3.9 inches.

Unit 69: Limestone. Composed of abundant ostracodes and large domal stromatolites; top 3.9 inches contains small domal stromatolites.

Unit 68: Limestone. Consists of grain-supported ostracodes and carbonate grains (well rounded); top 5.9 inches contains small domal stromatolites.

Unit 67: Limestone. Subhorizontal algal laminations and subordinate large domal stromatolites as wide as 23.6 inches, abundant ostracodes, forms ledge.

Unit 66: Limestone. Basal 11.8 inches similar to unit 65; 11.8 inches to top is light-medium-brownish-gray, fine-grained limestone.

Unit 65: Limestone. Consists of grain-supported ostracodes and lesser ooids and carbonate intraclasts, wavy planar laminations and ripples.

Unit 64: Interbedded green mudstone, siltstone, and sandstone. Contacts between beds are indistinct; top 2.3 ft is mudstone.

Unit 63: Sandstone, 65 microns. Well-exposed large ripples throughout, forms resistant ledge.

Unit 62: Interbedded mudstone (70 percent) and 70-125 micron sandstone (30 percent). Green mudstone contains thin sandstone beds; sandstone beds contain starved ripples in places, pinch and swell bedding, and sharp bases and tops.

Unit 61: Limestone. Basal 7.1 feet is white ostracode grainstone containing abundant sand; 7.1 feet to top consists of well-rounded carbonate intraclasts, ostracodes, and fish scales, rippled.

Unit 60: Mudstone. Green, several thin siltstones.

Unit 59: Limestone. Pillar-type stromatolites, pillars have spongy interior texture, tip and base of unit very irregular, green mudstone between pillars in places.

Unit 58: Mudstone, sandstone, and siltstone. Unit consists of green mudstone containing several thin beds of sandstone and siltstone.

Unit 57: Sandstone, 80-90 microns. Rippled.

Unit 56: Limestone. Silty micrite, yellow, top few inches contains abundant carbonate intraclasts and some ostracodes.

Unit 55: Interbedded mudstone, limestone, and 80 micron sandstone. Mudstone is green; limestone is ostracode grainstone; sandstone is one 2.4-inch-thick bed containing low-amplitude ripples.

Unit 54: Limestone. Basal 5.9 feet is white micrite containing sparse to abundant ostracodes and ooids; 5.9-6.6 feet consists of subhorizontal algal laminations; 6.6 feet to top contains pillar-type stromatolites and algal limestone intraclasts and ostracodes.

Unit 53: Covered.

Unit 52: Sandstone, 90-115 microns. Base sharp and flat over distance of 98.4 feet and contains a few small limestone clasts; 80 percent of unit structureless, 20 percent rippled; upper half poorly exposed.

Unit 51: Limestone. Micrite, sparse to abundant ostracodes; top 7.9 inches contains ostrcodes and well-rounded carbonate clasts as wide as 0.6 inches; forms locally prominent yellow band.

Unit 50: Interbedded mudstone, siltstone, sandstone, and minor limestone. Unit coarsens upward; basal 6.6 feet is silty green mudstone and rippled sandstone and siltstone; 6.6-8.9 feet consists of several 7.9-inch-thick beds of rippled 70-80 micron sandstone; 8.9 feet to top is mainly sandstone and siltstone, one 2-inch-thick bed ostracode and ooid grainstone is 10.8 feet above base of unit.

Unit 49: Mudstone. Greenish gray (5GY 6/1), several 0.8-in-thick beds of ostracode grainstone in basal 9.8 inches.

Unit 48: Sandstone, 100-115 microns. Base sharp and slightly scoured; basal 3.1 inches has IFC consisting of small limestone clasts; basal 12.5 feet contains well-exposed current ripples (85 percent), tabular tangential or trough crossbeds (5 percent), 10 percent is covered; 12.5 feet to top is planar laminated (50 percent) and structureless (50 percent); 7.9-inch-thick lens of IFC 11.8 inches below top of unit.

Unit 47: Limestone. Silty micrite; base irregular, top sharp; minor ostracodes; top 7.9 inches contains abundant oval to round 0.8-2.4-inch-wide patches spongy texture.

Unit 46: Interbedded mudstone and sandstone. Green moderately to very silty mudstone containing three 7.9-15.7 inches thick beds of very fine grained sandstone with gradational boundaries in upper half of unit.

Unit 44: Sandstone, 105 microns. Base irregular and sharp, grades upward to mudstone, structureless.

Unit 43: Mudstone and sandstone. Mudstone is green and purple, mottled in places; one bed of rippled sandstone 3.9-4.4 feet above base.

Unit 42: Sandstone. Continuation of unit 40, fines upward to mudstone, 40 percent rippled and 60 percent structureless or poorly exposed.

Unit 40: Sandstone, 110 microns. Rippled.

Unit 39: Mudstone, and sandstone. Green, very silty mudstone and several thin sandstone beds, sandstone contains wave ripples and HCS.

Unit 38: Sandstone, 75 microns. Base and top sharp and flat, structureless.

Unit 37: Mudstone. Greenish gray, silty, laminated, small zone of soft-sediment deformation; 7.9-19.7 inches above base is very fine grained sandstone.

Unit 36: Limestone. Basal 7.9 inches is stromatolite, subhorizontal laminations and small domes, sparse to abundant algal limestone clasts; 7.9-39.4 inches is white micrite; 39.4-53.1 inches is stromatolite, pillar-type and subhorizontal; 53.1 inches to top is algaly laminated limestone, mottled texture and algal limestone clasts; top of unit irregular, has 7.9 inches of relief.

Unit 35: Mudstone. Pale green, silty, calcareous.

Unit 34: Limestone. Composed of ostracodes, carbonate intraclasts, and thin algally laminated zones, very silty in places, unit ranges from silty grainstone to calcareous siltstone.

Unit 33: Mudstone. Very pale green, very silty, very calcareous.

Unit 32: Sandstone, 115 microns. Base sharp and flat, top gradational, ripples and planar laminations.

Unit 31 Mudstone. Green, very silty, calcareous; 2-2.6 feet above base mudstone is laminated and has thin siltstone interbeds.

Unit 30: Sandstone, 75 microns. Base sharp and flat, top gradational.

Unit 29: Mudstone. Green, fissile.

Unit 28: Sandstone, 110 microns. Sharp and flat base, rippled.

Unit 27: Mudstone. Green, laminated and fissile, calcareous, moderately silty to very silty.

Unit 26: Sandstone, 100 microns. Base and top sharp and flat, rippled.

Unit 25: Mudstone. Pale green very silty, noncalcareous, fills scour cut into unit 24.

Unit 24: Sandstone, 90 microns. Base indistinct, top truncated.

Unit 23: Mudstone. Green.

Unit 22: Sandstone, fines upward (175 to 65 microns). Base sharp and flat, scattered zones of ostracodes and algal limestone intraclasts near base, most of unit covered by desert varnish, some trough crossbeds in basal 6.6 feet.

Unit 21: Mudstone. Pale green, slightly silty, moderately calcareous, vertical burrows 0.4 inches wide by 1.4-2 inches long.

Unit 20: Sandstone, fines upward (170 to 80 microns) Base sharp and slightly irregular, sedimentary structures covered by weathering and lichen.

Unit 19: Mudstone. Yellow calcareous mudstone (70 percent) and green silty mudstone (30 percent).

Unit 18: Sandstone, coarsens upward (80 to 150 microns). 25 percent unit rippled, 5 percent contains wavy planar laminations, and 75 percent is obscured by weathering; 0-25 percent carbonate grains, one zone contains carbonate intraclasts and fish scales; unit thickens to east.

Unit 17: Mudstone. Light to medium gray and brown, moderately to very calcareous, silty, laminated.

Unit 16: Limestone. Micrite and algal laminated limestone (mainly subhorizontal, few small domes).

Unit 15: Limestone. Subhorizontal to domal stromatolites, most domes 3.9-11.8 inches wide, in places limestone contains algal limestone intraclasts.

Unit 14: Limestone. Composed of grain-supported ostracodes and ooids, very sandy.

Unit 13: Limestone. 80 percent silty micrite and 20 percent algaly laminated limestone (subhorizontal and very small domes).

Unit 12: Mudstone. Light greenish gray, very calcareous.

Unit 11: Limestone. Micrite containing 10 percent algal laminations (mainly subhorizontal with few very small domes).

Unit 10: Limestone. Domal stromatolites 7.9 inches high and 11.8 inches wide.

Unit 9: Limestone. Composed of grain-supported ostracodes, ooids, and lesser carbonate intraclasts; size of ostracodes increases upward to 0.004 inches long due to carbonate coating on ostracodes.

Unit 8: Interbedded sandstone, mudstone, and limestone. Basal 2 inches is sandstone; 2-4.7 inches is green mudstone; 4.7-15.7 inches is sandy ooid limestone; 15.7-39.4 inches is sandstone containing fish scales (10 percent), bone fragments, fragments of algaly laminated limestone; 39.4 inches to top is calcareous sandstone.

Unit 7: Mudstone. Light olive gray, silty, noncalcareous to slightly calcareous; basal 9.8 inches laminated; 4.7-inch-thick bed of sandstone 3.6 feet above base; 4.6-5.2 feet above base is silty mudstone containing ripples and wavy planar laminations.

Unit 6: Sandstone (65-80 microns) and siltstone. Basal 19.7 inches contains current ripples, top 5.9 inches planar and wavy planar laminations and one small water-escape structure.

Unit 5: Mudstone. Green.

Unit 4: Sandstone, fines upward (160 to140 microns). Base has 5.2 feet of scour, abundant yellow carbonate grains near base, trough crossbeds, 20 percent of troughs distorted by soft-sediment deformation.

Unit 3: Sandstone, 65-150 microns. Unit composed of thin sandstone beds, some separated by thin green mudstone interbeds, beds thicken upward and coarsen upward, bases of sandstones sharp, tops sharp to gradational.

Unit 2: Mudstone. Laminated, slightly to moderately calcareous, medium brown to olive green, silt content increases upward.

Unit 1: Limestone. Basal 9.8 inches is algally laminated limestone (80 percent has horizontal to subhorizontal laminations and 20 percent has domes) containing ostracodes and coated carbonate grains; middle 11.8 inches contains pillar-type stromatolites and ostracodes; upper 13.8 inches is ostracode grainstone containing a few fish scales.

LEGEND

LITHOLOGY


Sandstone


Mudstone


Covered


Limestone

Siltstone

CONTACTS

Sharp

PHYSICAL STRUCTURES

- Trough Cross-Strat.
- Scour
- Ripples, Unknown
- Wavy Planar Laminations
- Stromatolite, Domal
- Planar Lamination
- Wave Ripples
- Intraformational Conglomerate (IFC)
- Stromatolite, Small Pillars
- Hummocky Cross-Strat.
- Soft Sediment Deformation
- Current Ripples

LITHOLOGIC ACCESSORIES

- Oolites

ICHNOFOSSILS

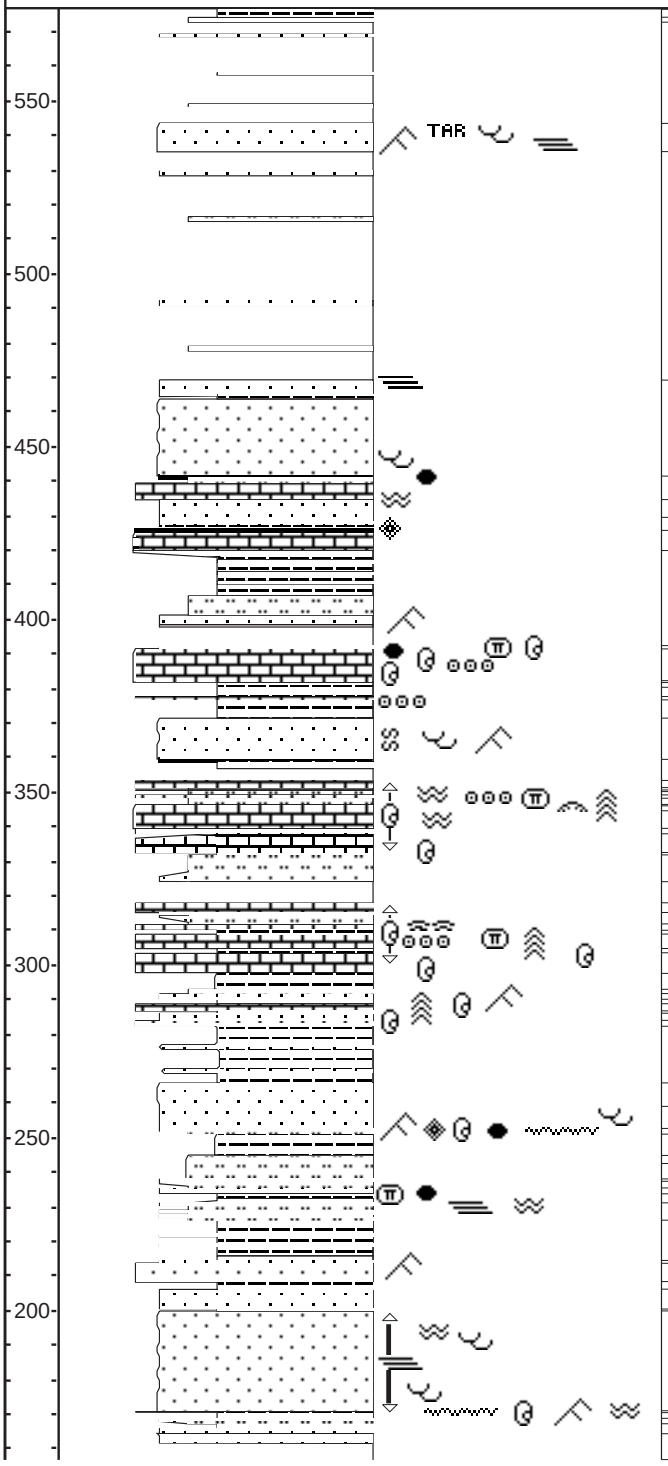
- Vertical Burrows

FOSSILS

- Carbonate Debris
- Fish Scales
- Ostracodes

Remy 14

The section is located in Dry Canyon and begins and ends in the SW1/4 section 5, T.13 S., R. 15 E., of the Salt Lake Base line and Meridian, Duchesne County, Utah.



UNIT NUMBER	FACIES
117	
116	Se
115	Mg
114	Sb
113	L
112	Se
111	Mg
110	L
109	Mg & Se
	Se
107	L
104	Mg
102	Mg
101	Sb
100	L
	Se & L
91	L
89	
87	Se
86	
85	
84	
81	L
79	L
78	Mg
	Se
70	Mg & Se
69	Sb
68	
66	Mg
64	Sb
58	Se
57	Mg
55	
53	Sf
51	Sb
47	Mg & Se
46	Sb

Unit 119: Mudstone. Green, poorly exposed.

Unit 118: Siltstone. Forms resistant ledge.

Unit 117: Mainly covered. Minor outcrops of green mudstone, siltstone, and sandstone.

Unit 116: Sandstone, 65-150 microns. Basal 4.9 feet is planar laminated, rippled, and trough crossbedded; 4.9 feet to top is rippled; very weakly tar stained in places.

Unit 115: Mainly covered. Abundant green mudstone float suggest unit is mainly green mudstone, 4-5 thin sandstone and siltstone beds.

Unit 114: Sandstone (fines upward (160 to 100 microns)) and minor mudstone. Base sharp, scours unit 113; basal 7.9 inches has lag consisting of smalll limestone clasts; 4.6 feet below top is bed of green mudstone scoured by overlying sandstone; basal 9.8 feet of unit is trough crossbedded; upper 4.6 feet planar laminated.

Unit 113: Limestone and siltstone (medium to coarse grained). Basal 4.3 feet is light-gray micrite; 4.3 feet to top is light-gray siltstone.

Unit 112: Sandstone, 70-80 microns. Wavy planar laminations.

Unit 111: Interbedded green mudstone and sandstone. Upward increase in bed thickness and amount of sandstone; 15.7 inches above base 2.8-inch-thick bed of sandstone containing 20 percent carbonate clasts.

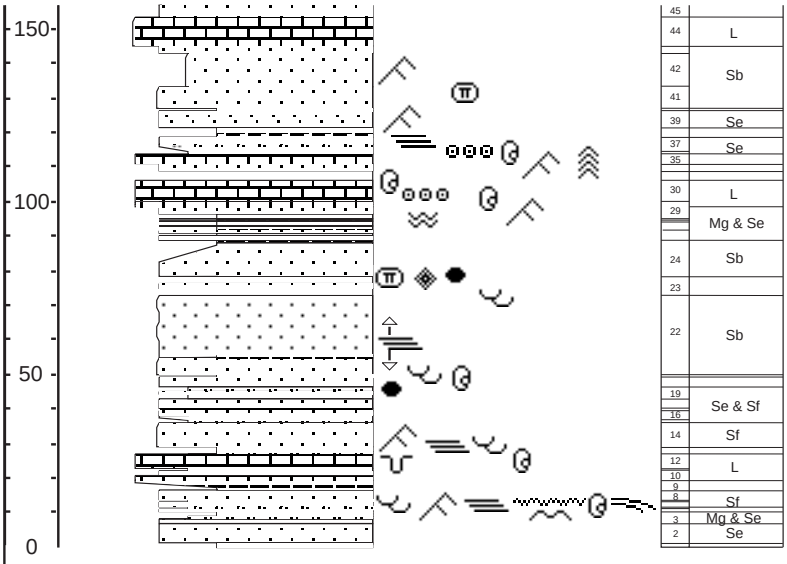
Unit 110: Limestone. Micrite or very calcareous mudstone, light-gray, weathers yellow, fine-grained, base gradational over 0.4-7.9 inches with underlying mudstone, top sharp.

Unit 109: Sandstone (80-115 microns), siltstone, and mudstone. Basal 5.9 feet is covered; 5.9-6.6 feet above base is rippled 115 micron sandstone; 6.6-9.2 feet is rippled 80 micron sandstone; 9.2-14.4 feet is very coarse grained structureless siltstone; 14.4 feet to top is silty green mudstone containing three 13.8-19.7 inch thick beds of structureless siltstone.

Unit 108: Sandstone, fines upward (125 to 65 microns). Contains as much as 10 percent fish scales, carbonate clasts and ostracodes.

Unit 107: Limestone. Silty micrite, abundant ostracodes 19.7-29.5 inches above base, other thin zones of ostracodes and ooids throughout unit.

Unit 106: Limestone. Ostracodal grainstone.



Unit 105: Mudstone. Consists of 3.9-inch-thick bed of medium gray calcareous mudstone that weathers orange overlain by 7.9-inch-thick bed of light-gray moderately calcareous mudstone.

Unit 104: Mudstone. Green, calcareous, silty, typical mudstone weathering.

Unit 103: Limestone. Mainly silty micrite; basal 0.8 inches is ooid grainstone.

Unit 102: Mudstone. Green, poorly exposed.

Unit 101: Sandstone, fines upward (150 to 75 microns). Base is sharp and flat; basal 4.3 feet contains trough crossbeds and large-scale soft sediment deformation; 4.3 feet to top contains ripples, trough crossbeds, and minor small-scale soft sediment deformation.

Unit 100: Mainly covered. Lower half is probably ostracode grainstone; olive-gray, fine-grained mudstone crops out beneath unit 101.

Unit 99: Limestone. Ostracodal grainstone.

Unit 98: Siltstone. Very calcareous, laminated.

Unit 97: Limestone. Ostracodal grainstone, wavy planar laminations.

Unit 96: Siltstone, coarse-grained. Light gray, calcareous, massive.

Unit 95: Limestone. Lower half is ostracode and ooid grainstone containing fish scales; upper half is ooid grainstone.

Unit 94: Siltstone. Laminated, calcareous.

Unit 93: Limestone. Consists of small domal and pillar-type stromatolites, and ostracodes.

Unit 92: Limestone. Silty micrite containing ostracodes.

Unit 91: Limestone. Ostracodal grainstone, wavy planar laminations; 15.7 inches above base is 3.9-inch-thick bed of siltstone.

Unit 90: Limestone. Unit consists of ostracodal grainstone that grades upward to light-gray silty limestone containing 10 percent ostacodes; top 0.8 inches is dark-gray laminated chert.

Unit 89: Limestone. Basal 9.8 inches is micrite containing minor ostracodes; upper 4.3 feet is ostracode grainstone.

Unit 88: Mudstone. Green; lower half typical mudstone weathering; upper half spheroidal weathering and hematite stains.

Unit 87: Sandstone (62-100 micron) and siltstone (coarse grained). Lower half is 100 micron structureless sandstone; upper half grades upward to siltstone.

Unit 86: Covered.

Unit 85: Limestone. Ostacodal grainstone; top 1 inch of unit is sandy; weathers orange yellow.

Unit 84: Siltstone (medium to coarse grained) and sandstone (65-70 micron). Unit coarsens upward from siltstone to laminated sandstone.

Unit 83: Limestone. Ostacodal grainstone; upper half contains thin (0.2-0.8 inches) beds of ostracode grainstone separated by thin mudcracked green mudstone drapes.

Unit 82: Interbedded green mudstone and siltstone. Unit fines upward; top 2.4 inches contains 50 percent ostracodes.

Unit 81: Limestone. Basal 9.8-23.6 inches consists of pillar-type algal stromatolites, top of lower zone is very irregular, overlain by silty micrite containing 20 percent ostracodes and ooids; upper 7.9 inches contains abundant fish scales.

Unit 80: Mudstone. Light green, silty, calcareous.

Unit 79: Limestone. Silty micrite, basal 5.2 feet has upward increase in proportion of ostrcodes from none to 25 percent; upper 11.8 inches contains minor ostracodes; structureless.

Unit 78: Mudstone. Grayish green (5G 5/2) to pale green (10G 6/2), some spheroidal weathering but most has typical mudstone weathering.

Unit 77: Interbedded siltstone (coarse grained) and sandstone (very fine grained). Bedding and contacts between beds indistinct.

Unit 76: Sandstone, 80-100 microns. Unit consists of rippled sandstone beds separated by 0.4-1.6-inch-thick beds of green mudstone.

Unit 75: Mudstone. Green, typical mudstone weathering.

Unit 74: Limestone. Silty micrite, 5-10 percent ostracodes; upper 3.9 inches contains pillar-type algal stromatolites.

Unit 73: Mudstone. Green.

Unit 72: Sandstone, 100-115 microns. Basal 3.9 inches consists of 2-3 beds of 100 microns sandstone containing 5-10 percent ostracodes; upper 15.7 inches is structureless 115 micron sandstone.

Unit 71: Sandstone (65 microns) and limestone. Sandstone containing minor ostracodes that grades upward to sandy ostracodal limestone, ostracodes look abraided.

Unit 70: Mudstone and sandstone (65-80 microns). Green mudstone containing 4-5 7.9-13.8 inches thick beds of sandstone.

Unit 69: Sandstone, 70-90 microns. Friable, structureless.

Unit 68: Sandstone, fines upward (125 to 105 microns). Base sharp and has 7.9 inches of scour, in places 2.8-inch-thick basal lag consists of carbonate clasts, carbonaceous debris, and ostracodes in matrix of 160 micron sand; unit mainly rippled, minor trough cross beds in lower half.

Unit 67: Siltstone (coarse grained) and sandstone (65-70 microns). Basal 3.9 inches is sandstone; upper 9.4 inches is calcareous siltstone.

Unit 66: Mudstone. Green, spheroidal weathering in places, most weathers like typical mudstone.

Unit 65: Siltstone (very coarse grained) and sandstone (62-110 microns). Siltstone that coarsens upward to 110 micron sandstone, numerous small bone and turtle shell fragments on top of unit.

Unit 64: Siltstone, very coarse-grained. Poorly exposed, green.

Unit 62: Sandstone, 70 microns. Base gradational with unit 61, bed thickness 0.4-3.1 inches.

Unit 61: Siltstone, green.

Unit 60: Sandstone, 70 microns. Fish scales and IFC in basal 3.1 inches.

Unit 59: Poorly exposed. Lower half continuation of unit 58; upper half green mudstone.

Unit 58: Siltstone (very coarse grained) and sandstone (very fine grained). Planar and wavy planar laminations.

Unit 57: Mudstone. Green, few thin beds of sandstone.

Unit 56: Sandstone, 65 microns. Rippled.

Unit 55: Mudstone-siltstone and sandstone. Interbedded very silty green mudstone or siltstone (60 percent) and sandstone (40 percent); ripples in upper sandstone.

Unit 54: Mudstone, green.

Unit 53: Sandstone, coarsens upward (95 to 120 microns). Structureless, numerous hematite concretions.

Unit 52: Mudstone. Green.

Unit 51: Sandstone, fines upward (135 to 70 microns). Base sharp and in places scours units 50 and 49; mainly planar laminations, some trough crossbeds (20 percent), wavy planar laminations with low-angle truncations, and minor tabular-tangential crossbeds.

Unit 50: Limestone. Very fine grained carbonate grains and some ostracodes, sandy, wavy planar laminations and ripples.

Unit 49: Mudstone. Light gray, very silty, noncalcareous, typical mudstone weathering.

Unit 48: Siltstone (coarse grained) and sandstone (70-80 micron). Coarsens upward from siltstone to sandstone at top, structureless.

Unit47: Sandstone (90-140 microns) and mudstone. Basal 15.7 inches consists of sandstone that fines upward (140 to 90 microns), ostracodes, obscure sedimentary structures; upper 19.7 inches green mudstone.

Unit 46: Sandstone. Partly exposed.

Unit 45: Sandstone, 135 microns. Base covered.

Unit 44: Limestone. Algal, blotchy porous texture, partly exposed.

Unit 43: Sandstone, very fine grained. Structureless.

Unit 42: Siltstone. Rippled.

Unit 41: Sandstone, 80-100 micron. Few fish scales and bone fragments.

Unit 40: Mudstone. Green, some intervals fissile.

Unit 39: Interbedded sandstone (90-105 microns) and siltstone (very coarse grained). Four or five 0.8-5.9-inch-thick beds of sandstone separated by siltstone, sandstone beds pinch-and-swell, sandstone coarsens upward from 90 to 105 microns and is rippled in places.

Unit 38: Mudstone and shale. Basal 15.7 inches is dark-brown, silty, fissile shale; upper 19.7 inches is silty, green, calcareous mudstone, some fissile zones.

Unit 37: Siltstone (medium to coarse grained) and sandstone (110 microns). Unit coarsens upward from siltstone to sandstone; calcareous and planar laminated.

Unit 36: Siltstone, coarse-grained. Rippled, sparse to 20 percent ostracodes and ooids.

Unit 35: Limestone. Ostracodal grainstone, pillar-type algal stromatolites in lower 7.9 inches.

Unit 34: Sandstone, fines upward slightly (115 to 95 microns).

Unit 31: Covered.

Unit 30: Limestone Basal 2 feet is ostracodal grainstone that grades upward to ooid grainstone consisting of carbonate-coated ostracodes, overall coarsening upward due to carbonate coatings on ostracodes; upper 3.6 feet is ostacode grainstone.

Unit 29: Sandstone (very fine grained), siltstone, and limestone. Basal 27.6 inches is indistinctly bedded sandstone and siltstone; upper 21.7 inches is mainly rippled ostracode grainstone containing sand stringers.

Unit 28: Mudstone. Pale olive (10Y 6/2); 2 inches above base is 0.4-inch-thick band fo orange ostracode grainstone, above this bed are a few less distinct bands of ostracodal grainstone.

Unit 27: Sandstone, 65-70 microns. Base sharp, ripples or wavy planar laminations.

Unit 26: Mudstone. Green, silty; 4.7-inch-thick 90 micron sandstone bed in center and 2-inch-thick sandstone bed about 3.9 inches from top.

Unit 25: Sandstone, 60-70 microns. Gradational base and top; friable, structureless; 3.9-5.9-inch-thick bed of green mudstone in center of bed.

Unit 24: Sandstone, fines upward (150 to 90 microns). Base poorly exposed; basal few inches contains carbonaceous debris, IFC, few bone fragments and fish scales; wedge shaped geometry, wedge thins toward southeast, sandstone beds dip 11°SSW; top 11.8 inches grades to green mudstone.

Unit 23: Mainly covered. One 15.7-inch-thick 125 micron sandstone bed in center.

Unit 22: Sandstone, 125-135 micron. Base sharp and flat; 3.9-inch-thick bed of green mudstone 4.9 feet above base; trough crossbeds in upper 4.9 feet and basal 19.9 inches; middle contains planar laminations with parting lineations and low-angle truncations.

Unit 21: Mudstone, green.

Unit 20: Sandstone, 150-130 microns. Base sharp, 5.9 inches of scour; wedge-shaped geometry, unit composed of 3-4 sandstone beds that dip about 15° ESE; trough crossbeds; basal few inches composed of 50 percent ostracodes, 35 percent 150 micron sand, and 15 percent IFC, rest of unit consists of about 20 percent ostracodes.

Unit 19: Interbedded siltstone (very coarse grained) and sandstone (100 micron). Siltstone (70 percent) and one bed of sandstone (30 percent).

Unit 18: Sandstone, 115 microns. Base is sharp and truncates unit 17; unit wedge shaped, thickens toward east-southeast and merges with unit 16; along line of section unit is sandstone, 4.9 feet to west unit is composed of ostracodal grainstone.

Unit 17: Siltstone, medium- to coarse-grained. Green, unit truncated east-southeast of section by unit 18 and by rise of unit 16.

Unit 16: Siltstone (very coarse grained) and sandstone (70 microns). Siltstone grades upward to sandstone.

Unit 15: Siltstone, very coarse grained. Unit truncated to east-southeast, siltstone clasts.

Unit 14: Sandstone:, fines upward (110 to 70 microns). Base sharp and slightly wavy; wedge shaped, top of unit slopping 20°ESE; basal 7.9 inches is trough or tabular-tangential crossbedded, 7.9-11.8 inches above base is planar laminated, 11.8 inches to top is rippled and contains numerous small hematite concretions and some linear concretions in upper 15.7 inches.

Unit 13: Siltstone and mudstone. Laminated, medium-grained siltstone containing black laminae in places, grades upward to very light green, calcareous, slightly silty mudstone.

Unit 12: Limestone. Base sharp; basal 2.3 feet is ostracodal limestone, ostracodes mainly grain-supported; upper 21.7 inches is yellow silty limestone containing bone fragments and vertical burrows ; top of unit is irregular and has 3.9-5.9 inches of relief, numerous well-rounded carbonate grains.

Unit 11: Sandstone (65-100 micron) and siltstone. Fines upward from 65-70 micron sandstone with some 90-100 micron sandstone to very coarse grained siltstone.

Unit 10: Limestone and sandstone. Base is gradational; lower half is thinly interbedded ostracodal and ooid limestone, sandy ostracode limestone, and sandstone; upper half mainly 70 micron sandstone.

Unit 9: Mudstone. Upward change from dusky yellow green (5GY 5/2), moderately silty, noncalcareous mudstone to pale-olive (10Y 6/2), very silty, slightly calcareous mudstone; typical mudstone weathering, scattered red-brown mottles.

Unit 8: Sandstone, fines upward (130 to 65 microns). Base sharp and scoured; most sedimentary structures obscured by desert varnish and lichen, some planar laminations in lower half and ripples in upper half.

Unit 7: Siltstone, coarse-grained to very coarse grained. Contains several lenticular (3.3-6.6 feet wide by 0.8 inches thick) 110 micron sandstone beds.

Unit 6: Sandstone, 100-110 microns. Base sharp, 3.9 inches of scour; planar laminations, minor wave ripples, and trough crossbeds, in places planar laminations appear wavy and have low-angle truncations (HCS); middle of unit contains 10 percent ostracodes.

Unit 5: Siltstone, very coarse grained. Structureless.

Unit 4: Sandstone, 100 microns. Base and top are sharp and flat, few vertical burrows in upper half, structureless.

Unit 3: Interbedded green mudstone, sandstone, and siltstone. Lower half is frable structureless sandstone (80 percent) and green silty mudstone (20 percent); upper half is interbedded green mudstone (60 percent), rippled, very fine grained sandstone (30 percent), and siltstone (10 percent).

Unit 2: Sandstone, 90-110 microns. Base gradational; 20 percent rippled and 80 percent covered by desert varnish.

Unit 1: Mudstone. Green, contains concretions.

LEGEND

LITHOLOGY

Sandstone
Siltstone
Shale
Mudstone
Silty Sandstone
Covered
Limestone
Chert

CONTACTS

Sharp

PHYSICAL STRUCTURES

- Trough Cross-Strat.
- Scour
- Ripples, Unknown
- Intraformational Conglomerate (IFC)
- Planar Lamination
- Mud Drapes
- Wave Ripples
- Stromatolite, Domal
- Hummocky Cross-Strat.
- Soft Sediment Deformation
- Wavy Planar Laminations
- Stromatolite, Small Pillars

LITHOLOGIC ACCESSORIES

- Oolites
- TAR - Tar

ICHNOFOSSILS

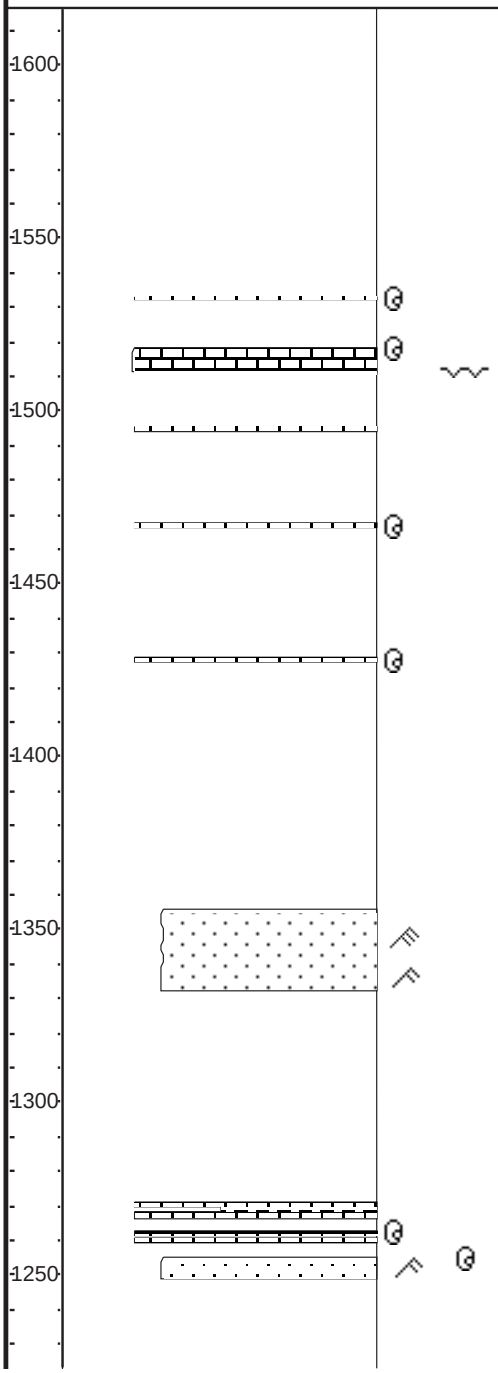
- Vertical Burrows

FOSSILS

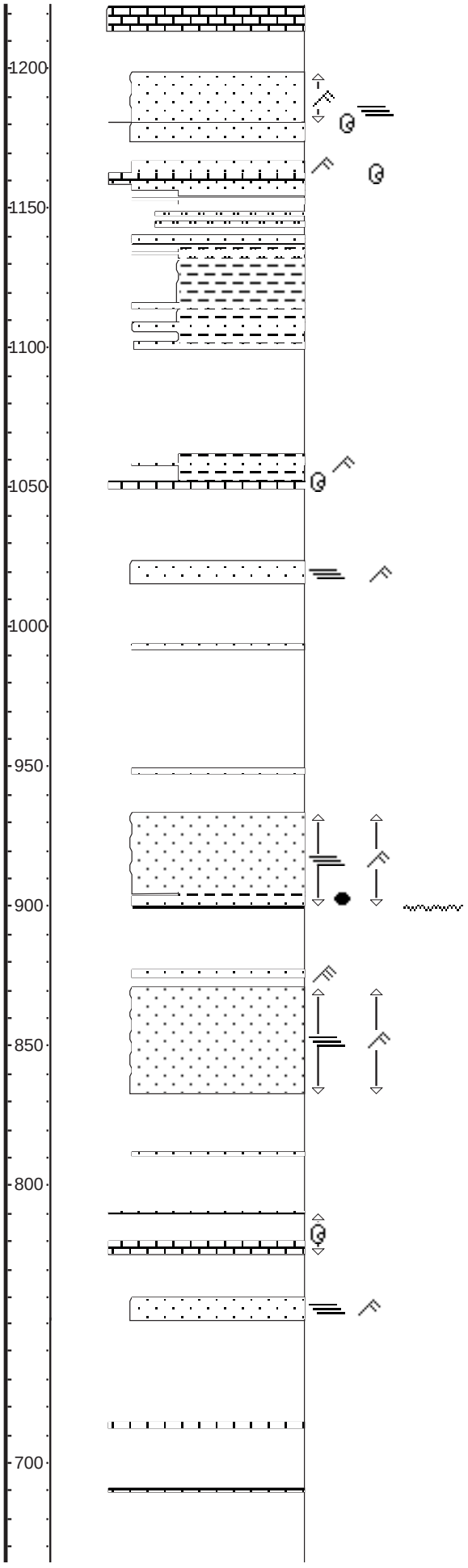
- Carbonate Debris
- Fish Scales
- Ostracodes

REMY 16

The section is located in Nine Mile Canyon and begins in the SE1/4SE1/4 and ends in the NE1/4NW1/4 section 11, T. 12 S., R. 13 E., of the Salt Lake Base line and Meridian, Duchesne County, Utah.



UNIT NUMBER	FACIES	Unit Number - Lithologic description
86	Mg	Unit 86: Covered. Relatively abundant fragments of greenish-gray mudstone. Top of measured section is at top of ridge.
		Unit 85: Limestone. Ostracode grainstone.
		Unit 84: Covered.
		Unit 83: Limestone. Ostracode grainstone, basal foot is interbedded greenish-gray mudstone and ostracode grainstone with mudcracks and burrows.
84		
83	L	Unit 82: Covered. Few beds of micrite containing ostracodes.
82		Unit 81: Covered. Probably greenish-gray mudstone.
		Unit 80: Sandstone, 90-150 microns. Base covered; basal 9 feet is mainly structureless and contains minor ripples; 9-20 feet above base contains well-exposed current ripples; top 3 feet is only partly exposed and contains possible greenish-gray mudstone interbeds.
		Unit 79: Covered. About 3 feet above base thin beds of limestone are composed of ostracodes and limestone clasts, limestone beds have mudcracks and very thin green mudstone interbeds.
81	Mg	Unit 78: Limestone. Basal 1.1 feet is ostracode grainstone; 1.1-1.5 feet is covered; 1.5-2.1 feet is micrite containing ostracodes; 2.1 feet to top is ostracode grainstone.
		Unit 77: Covered. Fragments of green mudstone.
80	Sb	Unit 76: Sandstone, 170 microns. Rippled, few percent ostracodes.
		Unit 75: Covered. Fragments of green mudstone.
		Unit 74: Limestone. Ostracode grainstone.
79		Unit 73: Covered (66 percent) and sandstone (34 percent). Lower third is rippled, very fine grained sandstone; upper two-thirds is covered.
		Unit 72: Sandstone, fines upward (170 to 125 microns). Base sharp and flat, planar laminations and ripples.
	L	
	L	
76	Se	Unit 71: Limestone. Contains ostracodes, forms recess beneath unit 72.
75	Mg	Unit 70: Sandstone, 100 microns. Rippled.
		Unit 69: Covered.



74	L
73	
72	Sb
70	Se
69	
67	Se L
66	Mr & Se
64	
63	Mg
	Mg
62	Mg & Se
61	Mg
60	Mr
59	Mg
	L
57	Mr & Mg
56	Sf
55	Mr & Mg
54	Sb
53	Mr & Mg
50	Sb
49	Mr & Mg
47	
46	L
45	
44	Se
43	

Unit 68: Sandstone, very fine grained. Rippled.

Unit 67: Sandstone and limestone. Basal 2.3 feet is very fine grained sandstone containing ostracodes; upper 4.3 feet is ostracode grainstone. Unit forms prominent yellow band that can be traced for 330 feet to the west and 1600 feet to the east.

Unit 66: Mainly (60 percent) covered; some (40 percent) green mudstone, siltstone, and very fine grained sandstone.

Unit 65: Sandstone, 125 microns. Base sharp and flat.

Unit 64: Interbedded sandstone (very fine grained), siltstone, and mudstone. Mudstone green.

Unit 63: Mudstone. Greenish-gray, 2.3-foot-thick bed of very fine grained sandstone about 5 feet above base.

Unit 62: Interbedded sandstone and mudstone. Sandstone very fine grained; mudstone green.

Unit 61: Covered. Probably green mudstone.

Unit 60: Covered. Red soil and abundant fragments of red mudstone suggest unit is red mudstone.

Unit 59: Mudstone. Greenish gray, one 0.66-foot-thick bed of rippled, very fine grained sandstone about 3 feet below top.

Unit 58: Limestone. Mainly micrite, in places unit consists of ostacode grainstone.

Unit 57: Covered. Red and green soil.

Unit 56: Sandstone, 100 microns. Base covered; 80 percent of unit structureless, 15 percent planar laminated, and 5 percent rippled.

Unit 55: Mainly (95 percent) covered. Fragments of mudstone suggests unit consists of alternating beds of red and green mudstone; two outcrops of sandstone.

Unit 54: Sandstone, coarsens upward slightly (90 to 110 microns). Base sharp, 1-1.3 feet of scour; basal 6.5 feet has 3-4 zones containing green mudstone clasts ; green mudstone bed 3 feet above base; 70 percent structureless, 25 percent contains planar laminations with low-angle truncations, 5 percent is rippled.

Unit 53: Covered. Fragments of red and green mudstone.

Unit 52: Sandstone, 100 microns. Well-exposed current ripples.

Unit 51: Covered.

Unit 50: Sandstone, 90-125 microns. Base covered, 70 percent of unit structureless, 20 percent contains planar laminations, and 10 percent is rippled.

Unit 49: Mainly (95 percent) covered. Surface covered with fragments of red and green mudstone, one 1.3-foot-thick bed of sandstone in center of unit.

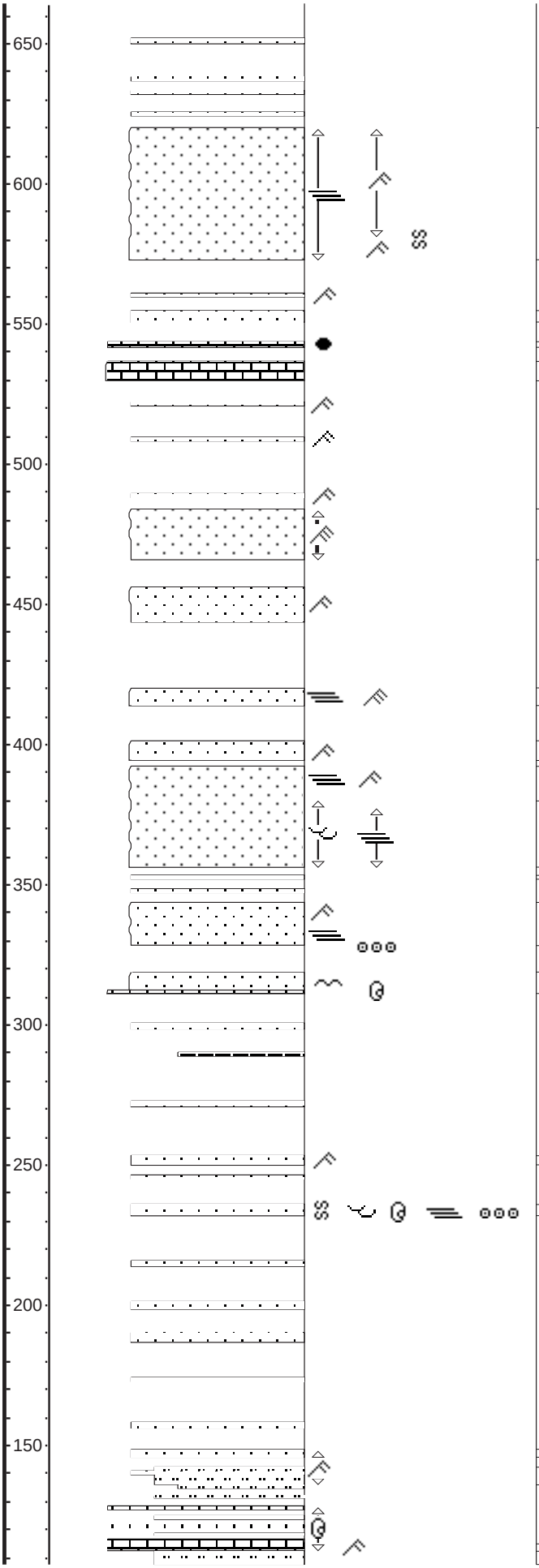
Unit 48: Limestone. Ostracode grainstone.

Unit 47: Covered.

Unit 46: Limestone. Ostracode grainstone.

Unit 45: Covered.

Unit 44: Sandstone, 70-80 microns. Base covered, ripples and planar laminations (in wedge sets).



42	Sb
41	
	Se
39	
37	
36	L
35	
34	Sb
33	
32	Sb
31	
30	Se
29	
28	Sf
26	
25	Sb
22	
21	Sb
20	
19	Se
18	
	Se
16	
	Se
14	Mr & Se
	Se
11	Se
10	
8	L Se

Unit 43: Mainly covered (95 percent). Basal 33 feet of unit contains 3-4 1-2-foot-thick beds of sandstone; at 68.9 feet above base unit is 0.8-foot-thick bed of ostracode limestone; 91.8 feet above base unit is 0.9-foot-thick bed of ostracode limestone; 98.4-109.2 feet above base are abundant fragments of red mudstone; at 111.5 feet above base unit are fragments of green mudstone.

Unit 42: Sandstone, 90-120 microns. Base is sharp and flat where exposed; basal 8.2 feet contains ripples, planar laminations, and zones with large-scale soft-sediment deformation (deformed trough crossbeds); upper 39.7 feet contains planar laminations (25 percent) and ripples (5 percent), 70 percent is structureless.

Unit 41: Mainly covered. Unit has a 1.8-foot-thick bed of rippled very fine grained sandstone 4.9 feet above base of unit.

Unit 40: Sandstone, 90-100 microns. Most is structureless.

Unit 39: Covered.

Unit 38: Limestone. Abundant limestone clasts and algally laminated zones.

Unit 37: Covered.

Unit 36: Limestone. Ostracode grainstone.

Unit 35: Mainly (95 percent) covered and 5 percent rippled sandstone.

Unit 34: Sandstone, 80-100 microns. Base poorly exposed, 30 percent of unit structureless and 70 percent contains well-exposed current ripples.

Unit 33: Covered.

Unit 32: Sandstone, 70-90 microns. Base covered; 50 percent of unit structureless and 50 percent contains ripples (25-40 inches above base are current ripples).

Unit 31: Covered.

Unit 30: Sandstone, 90 microns. Basal 1.8 feet structureless; 1.8-3.6 feet above base contains well-exposed current ripples; 3.6 feet to top contains planar laminations; unit thins to 1.6 feet about 50 feet east of section.

Unit 29: Covered.

Unit 28: Sandstone, 110-130 microns. Base is covered, most of unit structureless, 20 percent rippled.

Unit 27: Covered.

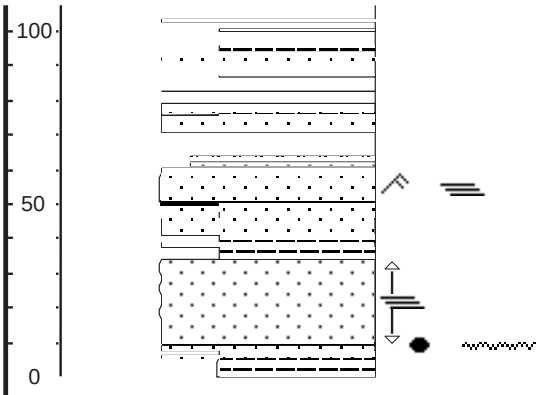
Unit 26: Sandstone, fines upward (140 to 90 microns). Lower third of unit contains planar laminations overlain by trough crossbeds; upper two-thirds of unit is only partly exposed and contains planar laminations and ripples.

Unit 25: Sandstone, 150-190 microns. Base covered, 70 percent structureless and 30 percent contains trough crossbeds (more common in the upper half of the unit) and planar laminations.

Unit 24: Covered.

Unit 23: Sandstone, 100 microns.

Unit 22: Covered by thick soil. One 1.5-foot-thick bed of very fine grained sandstone in center of unit.



7	Mr
6	Se
5	Mr
4	Se
3	Mr & Mg & Se
2	Sb
1	Mr & Mg & Se

Unit 21: Sandstone, 80-115 microns. Base of unit covered; basal few centimeters of unit contains 5-10 percent ooids; lower half of unit contains planar laminations that have some wedge sets; upper half of unit is rippled; unit is laterally continuous (can be seen on ridge 500 feet to west)

Unit 20: Covered.

Unit 19: Sandstone, fines upward (140 to 110 microns). Lenticular bed of ostracode grainstone about 2 inches above base of unit; wave rippled in unit is probably composed of amalgamated .5-1-foot-thick sandstone beds.

Unit 18: Mainly (95 percent) covered. Few minor outcrops of green mudstone and sandstone, soil is gray.

Unit 17: Sandstone, 90 microns. Rippled.

Unit 16: Covered by soil and talus. One 1.3-foot-thick bed of rippled, very fine grained sandstone.

Unit 15: Sandstone, fines upward slightly (150 to 120 microns). Base contains 5-10 percent ostracodes, top of unit 10 percent ostracodes and ooids; unit is planar laminated (50 percent) and trough crossedded (50 percent), about half of trough crossbeds exhibit soft-sediment deformation.

Unit 14: Mainly (90 percent) covered. Lower third has red soil (underlain by red mudstone); upper two-thirds has light gray soil (underlain by green mudstone); few (10 percent) 0.6-1.6-foot-thick beds of sandstone.

Unit 13: Sandstone, 90-100 microns. Rippled.

Unit 12: Covered.

Unit 11: Siltstone and sandstone. Basal 4.1 feet is fissile, rippled siltstone; 4.1-4.9 feet is very fine grained sandstone; 4.9 feet to top is siltstone.

Unit 10: Mainly (60 percent) covered and lesser (40 percent) siltstone and limestone. Limestone contains sparse ostracodes; 1.1-foot-thick bed of gray mudstone crops out beneath unit 11.

Unit 9: Limestone. Mainly rippled ostracode grainstone, several 0.2-0.5-foot-thick micrite interbeds in upper half, micrite is brecciated or mudcracked in places.

Unit 8: Interbedded siltstone (70 percent) and sandstone (30 percent). Sandstone is very fine grained, generally forms ledges; siltstone generally forms slope.

Unit 7: Mainly covered. Most (85 percent) of unit is covered and has red soil (probably weathered red mudstone); few thin outcrops of red mudstone (10 percent) and minor (5 percent) thin beds of very fine grained sandstone.

Unit 6: Sandstone (70-100 microns) and minor mudstone. Basal 4.6 feet consists of structureless 100 micron sandstone; 4.6-5.6 feet is red mudstone; 5.6 feet to top is structureless 70 micron sandstone.

Unit 5: Mainly covered. Red soil covers 85 percent of unit, few outcrops of very fine grained sandstone and siltstone in lower half of unit, bed thickness of sandstone-siltstone is 11.8-15.7 inches.

Unit 4: Sandstone, 70-90 microns. Base sharp and flat, well-exposed planar laminations throughout except for top 2 inches, which is rippled.

Unit 3: Interbedded sandstone (50 percent), red mudstone (45 percent), and green mudstone (5 percent). Middle of unit consists of 4.9-foot-thick bed of very fine grained sandstone.

Unit 2: Sandstone, 90-130 microns. Base sharp, about 0.6 feet of scour, few small intraformational clasts at base; basal 3.3 feet contains well-exposed planar laminations with low-angle truncations in a few places; upper 23 feet of unit contains some planar laminations (40 percent), but most (60 percent) is structureless.

Unit 1: Interbedded mudstone (70 percent) and sandstone (30 percent). Mudstone is red and green; sandstone is two 1-foot-thick beds, top of upper sandstone is 0.6 feet below unit 2.

LEGEND

LITHOLOGY

Sandstone
Siltstone
Mudstone
Shale
Covered
Limestone

CONTACTS

Sharp

PHYSICAL STRUCTURES

- Trough Cross-Strat.
- Planar Tabular Bedding
- Scour
- Wave Ripples
- Ripples
- Current Ripples
- Soft Sediment Deformation
- Intraformational Conglomerate (IFC)

LITHOLOGIC ACCESSORIES

- Oolites

FOSSILS

- Ostracodes